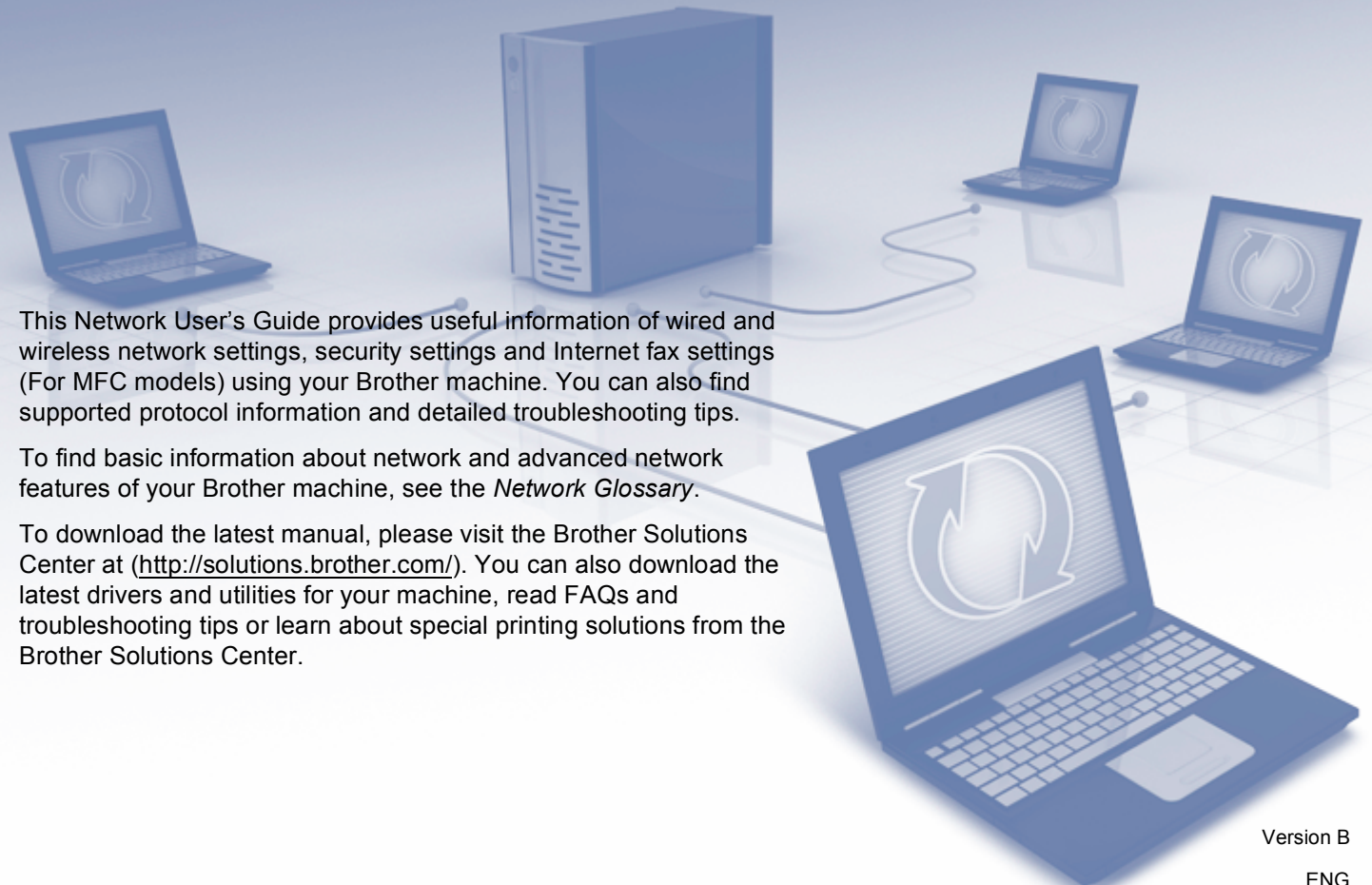# Network User's Guide

Multi-Protocol On-board Ethernet Multi-function Print Server and Wireless Multi-function Print Server

This Network User's Guide provides useful information of wired and wireless network settings, security settings and Internet fax settings (For MFC models) using your Brother machine. You can also find supported protocol information and detailed troubleshooting tips.

To find basic information about network and advanced network features of your Brother machine, see the *Network Glossary*.

To download the latest manual, please visit the Brother Solutions Center at (http://solutions.brother.com/). You can also download the latest drivers and utilities for your machine, read FAQs and troubleshooting tips or learn about special printing solutions from the Brother Solutions Center.

Version B

ENG

Applicable models

This User's Guide applies to the following models.

DCP-J4110DW, MFC-J2310/J2510/J4310DW/J4410DW/J4510DW/J4610DW/J4710DW

Definitions of notes

We use the following icons throughout this User's Guide:

IMPORTANT	IMPORTANT indicates a potentially hazardous situation which, if not avoided, may result in damage to property or loss of product functionality.
NOTE	Notes tell you how you should respond to a situation that may arise or give tips about how the operation works with other features.

Compilation and publication notice

Under the supervision of Brother Industries, Ltd., this manual has been compiled and published, covering the latest product's descriptions and specifications.

The contents of this manual and the specifications of this product are subject to change without notice.

Brother reserves the right to make changes without notice in the specifications and materials contained herein and shall not be responsible for any damages (including consequential) caused by reliance on the materials presented, including but not limited to typographical and other errors relating to the publication.

IMPORTANT NOTE

■ This product is approved for use in the country of purchase only. Do not use this product outside the country of purchase as it may violate the wireless telecommunication and power regulations of that country.

■ Windows® XP in this document represents Windows® XP Professional, Windows® XP Professional x64 Edition and Windows® XP Home Edition.

■ Windows Server® 2003 in this document represents Windows Server® 2003, Windows Server® 2003 x64 Edition, Windows Server® 2003 R2 and Windows Server® 2003 R2 x64 Edition.

■ Windows Server® 2008 in this document represents Windows Server® 2008 and Windows Server® 2008 R2.

■ Windows Vista® in this document represents all editions of Windows Vista®.

■ Windows® 7 in this document represents all editions of Windows® 7.

■ Please go to the Brother Solutions Center at http://solutions.brother.com/ and click **Manuals** on your model page to download the other manuals.

- Not all models are available in all countries.
- In this manual, the LCD messages of the MFC-J2510 or MFC-J4510DW are used if not specified.

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Section I   Network Operation

Section II Network Glossary

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Section I

Network Operation

1 Introduction

Network features

Your Brother machine can be shared on a 10/100 MB (Mbit/s) wired or IEEE 802.11b/g/n wireless network using the internal network print server. The print server supports various functions and methods of connection depending on the operating system you are running on a network supporting TCP/IP. The following chart shows what network features and connections are supported by each operating system.

NOTE

• Although the Brother machine can be used in both a wired and wireless network, only one connection method can be used at a time. However, a wireless network connection and Wi-Fi Direct™ connection, or a wired network connection and Wi-Fi Direct connection can be used at the same time.

• For details, please refer to the Wi-Fi Direct Guide located on the **Manuals** download page for your model on the Brother Solutions Center (http://solutions.brother.com/).

1

Operating Systems	Windows® XP Windows Vista® Windows® 7	Windows Server® 2003/2008	Mac OS X v10.5.8, 10.6.x, 10.7.x
Printing	✔	✔	✔
Scanning See *Software User's Guide*.	✔		✔
PC Fax Send [1] See *Software User's Guide*.	✔		✔
PC Fax Receive [1] See *Software User's Guide*.	✔		
Network Photo Capture See *Software User's Guide*.	✔		✔
BRAdmin Light See page 5.	✔	✔	✔
BRAdmin Professional 3 [2] See page 8.	✔	✔	
Web Based Management (web browser) See page 46.	✔	✔	✔
Remote Setup [3] See *Software User's Guide*.	✔		✔
Status Monitor See *Software User's Guide*.	✔		✔
Driver Deployment Wizard	✔	✔	
Vertical Pairing See page 95.	✔ [4]		

[1]   Black and White only. Not available for DCP models.

[2]   BRAdmin Professional 3 is available as a download from http://solutions.brother.com/.

[3]   Not available for DCP models.

[4]   Windows® 7 only.

1

Other Network features

LDAP (For MFC-J2510/J4510DW/J4710DW)

The LDAP protocol allows you to search for information such as fax numbers and E-mail addresses from your server. (See *LDAP operation (For MFC-J2510/J4510DW/J4710DW)* on page 57.)

Internet fax (For MFC models) (Available as a download)

Internet fax (IFAX) allows you to send and receive fax documents using the Internet as the transport mechanism. (See *Internet fax (For MFC models) (Available as a download)* on page 59.)

In order to use this function, please go to the downloads page for your model on the Brother Solutions Center (http://solutions.brother.com/). Before using this function, you have to configure the necessary machine settings by using the machine's control panel. For details, please refer to the User's Guide for Internet fax on the web site listed above.

Security

Your Brother machine employs some of the latest network security and encryption protocols available. (See *Security features* on page 71.)

Secure Function Lock 2.0

Secure Function Lock 2.0 increases security by restricting the use of functions. (See *Secure Function Lock 2.0* on page 49.)

Brother Web Connect

Brother Web Connect allows you to download and print images and also to upload files by accessing services on the internet directly from your machine. For details, please refer to the Web Connect Guide located on the **Manuals** download page for your model on the Brother Solutions Center (http://solutions.brother.com/).

2 Changing your machine's network settings

How to change your machine's network settings (IP address, Subnet mask and Gateway)

Using the control panel

You can configure your machine for a network using the control panel `Network` settings. (See *Control panel setup* on page 31.)

Using the Web Based Management (web browser)

A standard web browser can be used to change your print server settings using the HTTP (Hyper Text Transfer Protocol). (See *How to configure the machine settings using Web Based Management (web browser)* on page 47.)

Using the BRAdmin Light utility

The BRAdmin Light utility is designed for the initial setup of Brother network connected devices. It can also search for Brother products in a TCP/IP environment, view the status and configure basic network settings, such as the IP address.

Installing BRAdmin Light

■ Windows®

1. Please make sure that your machine is ON.

2. Turn on your computer. Close any running applications before configuration.

3. Put the supplied CD-ROM into your CD-ROM drive. The opening screen will appear automatically. If the model name screen appears, choose your machine. If the language screen appears, choose your language.

4. The CD-ROM main menu will appear. Click **Custom Installation**, and then **Network Utilities**.

5. Click **BRAdmin Light** and follow the on-screen instructions.

NOTE

If the Brother screen does not appear automatically, go to **Computer (My Computer)**, double-click the CD-ROM icon, and then double-click **start.exe**.

■ Macintosh

The BRAdmin Light utility is available as a download from the Brother Solutions Center (http://solutions.brother.com/).

Setting the IP address, Subnet Mask and Gateway using BRAdmin Light

NOTE

- You can download the latest BRAdmin Light utility version from http://solutions.brother.com/.

- If you require more advanced printer management, use the latest BRAdmin Professional 3 utility that is available as a download from http://solutions.brother.com/. This utility is only available for Windows® users.

- If you are using a firewall function of anti-spyware or antivirus applications, temporarily disable them. Once you are sure that you can print, re-enable the application.

- Node Name: The Node Name appears in the current BRAdmin Light window. The default Node Name of the print server in the machine is "BRNxxxxxxxxxxxx" or "BRWxxxxxxxxxxxx". ("xxxxxxxxxxxx" is your machine's MAC Address / Ethernet Address.)

1. Start the BRAdmin Light utility.

    ■ Windows®

       Click 🏁 / **All Programs** / **Brother** / **BRAdmin Light** / **BRAdmin Light**.

    ■ Macintosh

       When the download has completed, double click the **BRAdmin Light.jar** file to start the BRAdmin Light utility.

2. BRAdmin Light will search for new devices automatically.

3. Double-click the unconfigured device.
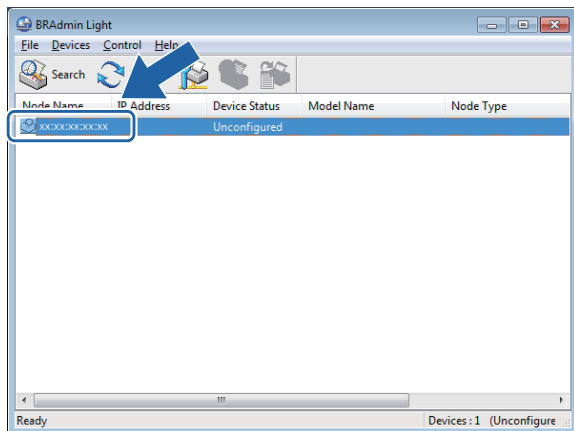
Windows®   **Macintosh**
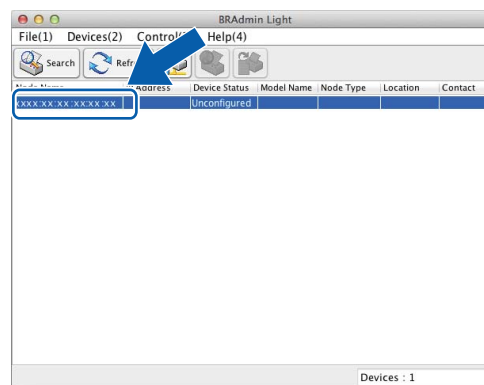
NOTE

- If the print server is set to its factory default settings (if you don't use a DHCP/BOOTP/RARP server), the device will appear as **Unconfigured** in the BRAdmin Light utility screen.

• You can find the Node Name and MAC Address / Ethernet Address by printing the Network Configuration Report. (See *Printing the Network Configuration Report* on page 39.) You can also find the Node Name and MAC Address from the control panel on your machine. (See *Control panel setup* on page 31.)

d Choose **STATIC** for the **Boot Method**. Enter the **IP Address**, **Subnet Mask** and **Gateway** (if needed) of your print server.

Windows®   **Macintosh**
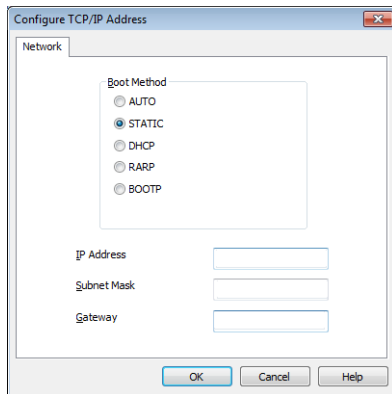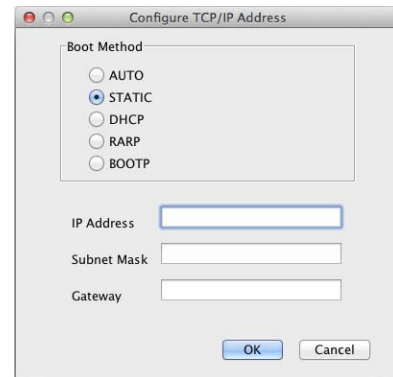
e Click **OK**.

f With the correctly programmed IP address, you will see the Brother print server in the device list.

Other Management Utilities

Your Brother machine has the following management utility to change your network settings.

BRAdmin Professional 3 utility (Windows®)

BRAdmin Professional 3 is a utility for a more advanced management of network connected Brother devices. This utility can search for Brother products on your network and view the device status from an easy to read Explorer style window that changes color identifying the status of each device. You can configure network and device settings along with the ability to update device firmware from a Windows® computer on your LAN. BRAdmin Professional 3 can also log activity of Brother devices on your network and export the log data in an HTML, CSV, TXT or SQL format.

To download, and for more information, visit us at http://solutions.brother.com/.

NOTE

• Please use the latest version of the BRAdmin Professional 3 utility that is available as a download from http://solutions.brother.com/. This utility is only available for Windows® users.

• If you are using a firewall function of anti-spyware or antivirus applications, temporarily disable them. Once you are sure that you can print, re-enable the application.

• Node name: The node name appears in the current BRAdmin Professional 3 window. The default Node name is "BRNxxxxxxxxxxxx" or "BRWxxxxxxxxxxxx". ("xxxxxxxxxxxx" is your MAC Address / Ethernet Address.)

3 Configuring your machine for a wireless network

Overview

To connect your machine to your wireless network, you need to follow the steps in the *Quick Setup Guide*. The wireless setup method using the installer CD-ROM and a USB cable is the easiest method for setup.

For additional wireless configuration methods please read this chapter for more details on how to configure the wireless network settings. For information on TCP/IP settings, see *How to change your machine's network settings (IP address, Subnet mask and Gateway)* on page 5.

NOTE

• The Wi-Fi® LED indicator on the control panel will appear when the network interface is using a WLAN.

• To achieve optimum results with normal every day document printing, place the Brother machine as close to the WLAN access point/router as possible with minimal obstructions. Large objects and walls between the two devices as well as interference from other electronic devices can affect the data transfer speed of your documents.

  Due to these factors, wireless may not be the best method of connection for all types of documents and applications. If you are printing large files, such as multi-page documents with mixed text and large graphics, you may want to consider choosing wired Ethernet for a faster data transfer, or USB for the fastest throughput speed.

• Although the Brother machine can be used in both a wired and wireless network, only one connection method can be used at a time. However, a wireless network connection and Wi-Fi Direct connection, or a wired network connection and Wi-Fi Direct connection can be used at the same time.

• For details, please refer to the Wi-Fi Direct Guide located on the **Manuals** download page for your model on the Brother Solutions Center (http://solutions.brother.com/).

• Before configuring wireless settings, you will need to know your SSID and Network Key.

Confirm your network environment

Connected to a computer with a WLAN access point/router in the network (Infrastructure mode)
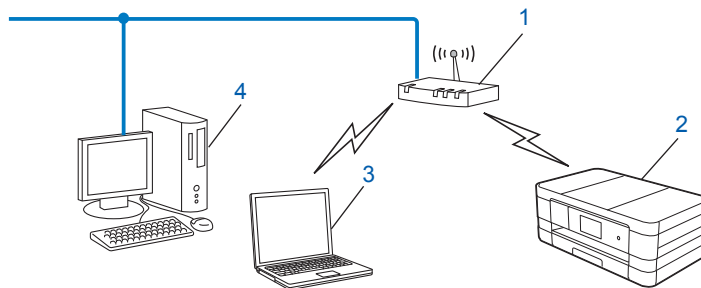
1   **WLAN access point/router** [1]

   [1]   If your computer supports Intel® My WiFi Technology (Intel® MWT), you can use your computer as a Wi-Fi Protected Setup supported access point.

2   **Wireless network machine (your machine)**

3   **Wireless capable computer connected to the WLAN access point/router**

4   **Wired computer (which does not have wireless capability) connected to the WLAN access point/router with an Ethernet cable**

Install method

The following instructions will offer three methods for installing your Brother machine in a wireless network environment. Choose the method you prefer for your environment.

■ Wireless configuration temporarily using a USB cable (Recommended)

   See *Wireless configuration temporarily using a USB cable* on page 12.

■ One push wireless configuration using WPS or AOSS™

   See *One push configuration using WPS (Wi-Fi Protected Setup™) or AOSS™* on page 14.

■ Wireless configuration using the Setup Wizard from the control panel

   See *Configuration using the machine's control panel Setup Wizard* on page 20.

Connected to a wireless capable computer without a WLAN access point/router in the network (Ad-hoc mode)

This type of network does not have a central WLAN access point/router. Each wireless client communicates directly with each other. When the Brother wireless machine (your machine) is part of this network, it receives all print jobs directly from the computer sending the print data.
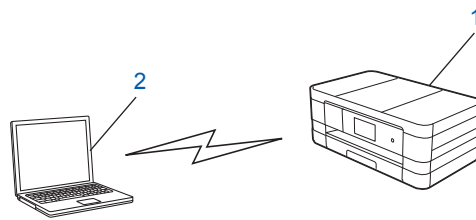
1 Wireless network machine (your machine)

2 Wireless capable computer

We do not guarantee the wireless network connection with Windows Server® products in Ad-hoc mode.

To set up your machine in Ad-hoc mode, see *Configuration in Ad-hoc Mode* on page 27.

Wireless configuration temporarily using a USB cable

It is recommended that you use a computer wirelessly connected to your network for this method.

You can remotely configure the machine from a computer on the network using a USB cable (A) [1].
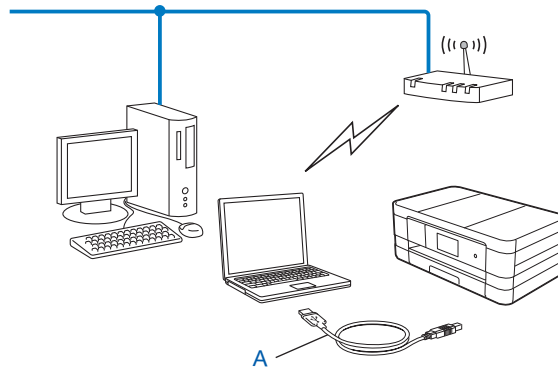
[1]   You can configure the wireless settings of the machine using a USB cable temporarily connected to a wired or wireless computer.

IMPORTANT

• You need to temporarily use a USB cable during configuration (cable not included).

• If you are using Windows® XP, or currently using a computer connected to an access point/router by network cable, you need to know the SSID and Network Key of your access point/router. Write them down in the area below, as they are required when configuring the machine's wireless settings.

Item	Record the current wireless network settings
SSID (Network Name):	
Network Key	

1️⃣ Turn on your computer.

2️⃣ Start the Brother installer application.

■ **Windows®**

1   Put the supplied CD-ROM into your CD-ROM drive. The opening screen will appear automatically. If the language screen appears, choose your language.

2   The CD-ROM main menu will appear. Click **Custom Installation**.

NOTE

• If the Brother screen does not appear automatically, go to **Computer (My Computer)**, double-click the CD-ROM icon, and then double-click **start.exe**.

• The screen on your machine may vary depending on your region.

3   Click **Wireless LAN Setup Wizard**.

■ **Macintosh**

1 Put the supplied CD-ROM into your CD-ROM drive. Double-click the **BROTHER** icon on your desktop.

2 Double-click **Utilities**.

3 Double-click **Wireless Device Setup Wizard**.

c When **Do you have a USB cable?** is displayed, choose
Yes, I have a USB cable to use for installation.

d Follow the on-screen instructions to configure the wireless settings, and to install the drivers and software.

NOTE

When the **Available Wireless Networks** screen appears, if your access point is set to not broadcast the SSID you can manually add it by clicking the **Advanced** button. Follow the on-screen instructions for entering the **Name (SSID)**.

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

One push configuration using WPS (Wi-Fi Protected Setup™) or AOSS™

You can use WPS or AOSS™ from the control panel settings to configure your wireless network settings if your WLAN access point/router (A) supports either Wi-Fi Protected Setup (PBC [1]) or AOSS™.
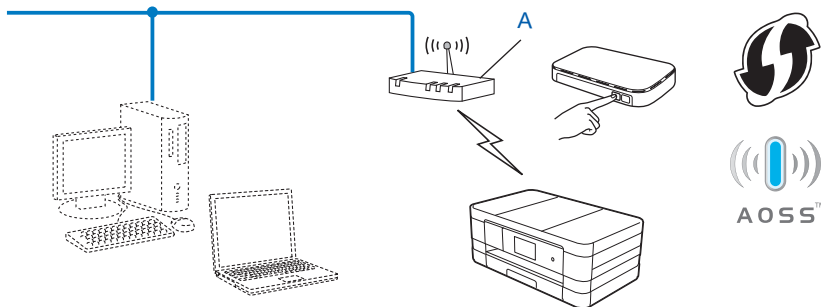
[1] Push Button Configuration

IMPORTANT

- If you are going to connect your Brother machine to your network, we recommend that you contact your system administrator prior to installation. **You must know your wireless network settings before you proceed with this installation.**

- If you have previously configured the wireless settings of the machine, you must reset the LAN settings before you can configure the wireless settings again.

  To reset the LAN settings, see *Restoring the network settings to factory default* on page 38.

- Your Brother machine supports the use of the first WEP key only.

One-push configuration using WPS (Wi-Fi Protected Setup) or AOSS™

(For MFC-J2510/J4510DW/J4710DW)

① Press 🔧.

② Press Wi-Fi.

③ Press WPS/AOSS.

④ When Switch Network interface to wireless? is displayed, press Yes to accept.
This will start the wireless setup wizard.
To cancel, press No.

5 When the LCD shows `Start WPS or AOSS`, press the WPS or AOSS™ button on your wireless access point/router. See the User's Guide for your wireless access point/router for instructions. Then press `OK` and your machine will now automatically detect which mode (WPS or AOSS™) your wireless access point/router uses and try to connect to your wireless network.

6 A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report. See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

1 Press `Settings`.

2 Press ⌃ or ⌄ to display `Network` and then press `Network`.

3 Press `WLAN`.

4 Press ⌃ or ⌄ to display `WPS/AOSS`, and press `WPS/AOSS`.

5 When `Network I/F switched to Wireless` is displayed, press `Yes` to accept. This will start the wireless setup wizard. To cancel, press `No`.

6 When the LCD shows `Start WPS or AOSS`, press the WPS or AOSS™ button on your wireless access point/router. See the User's Guide for your wireless access point/router for instructions. Then press `OK` and your machine will now automatically detect which mode (WPS or AOSS™) your wireless access point/router uses and try to connect to your wireless network.

7 A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report. See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

Configuration using the PIN Method of WPS (Wi-Fi Protected Setup)

If your WLAN access point/router (A) supports WPS, you can also configure using the PIN Method of WPS. The PIN (Personal Identification Number) Method is one of the connection methods developed by the Wi-Fi Alliance[®]. By inputting a PIN which is created by an Enrollee (your machine) to the Registrar (a device that manages the wireless LAN), you can setup the wireless network and security settings. See the User's Guide for your WLAN access point/router for instructions on how to access the WPS mode.

■ Connection when the WLAN access point/router (A) doubles as a Registrar.
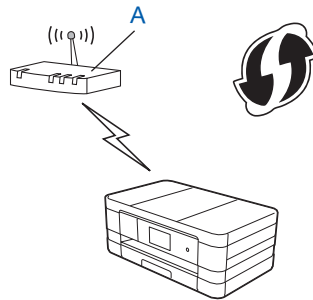
■ Connection when another device (C), such as a computer is used as a Registrar.
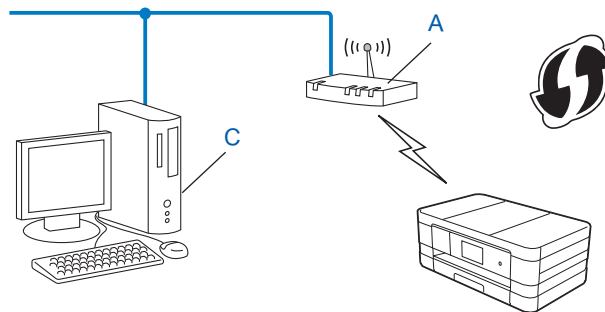
NOTE

Routers or access points that support WPS (Wi-Fi Protected Setup) have a symbol as shown below.
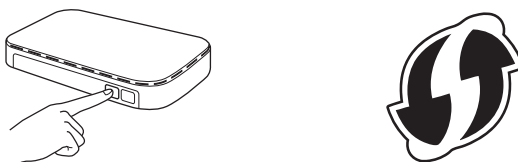
(For MFC-J2510/J4510DW/J4710DW)

1 Press ⚙️.

2 Press Wi-Fi.

3 Press WPS w/PIN Code.

4 When Switch Network interface to wireless? is displayed, press Yes to accept.
This will start the wireless setup wizard.
To cancel, press No.

5 The LCD will show an 8 digit PIN and the machine begins searching for a WLAN access point/router for up to 5 minutes.

6 Using a computer that is on the network, type "http://access point's IP address/" into your browser. (Where "access point's IP address" is the IP address of the device that is used as the Registrar [1].) Go to the WPS (Wi-Fi Protected Setup) setting page and input the PIN which the LCD shows in 5 to the Registrar and follow the on-screen instructions.

[1] The Registrar is normally the WLAN access point/router.

NOTE

The setting page may be different, depending on the brand of WLAN access point/router. See the instruction manual that came with your WLAN access point/router.

If you are using your Windows Vista® or Windows® 7 computer as a Registrar, complete the following steps.

NOTE

To use a Windows Vista® or Windows® 7 computer as a Registrar, you need to register it to your network in advance. See the instruction manual that came with your WLAN access point/router.

1 (Windows Vista®)

Click 🏁, **Network**, and then **Add a wireless device**.

(Windows® 7)

Click 🏁, **Control Panel**, **Network and Internet**, and then
Add a wireless device to the network.

2 Choose your machine and click **Next**.

3 Input the PIN from the printed page and then click **Next**.

4 Choose your network that you want to connect to, and then click **Next**.

5 Click **Close**.

7️⃣ A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report. See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

1️⃣ Press Settings.

2️⃣ Press ∧ or ∨ to display Network and then press Network.

3️⃣ Press WLAN.

4️⃣ Press ∧ or ∨ to display WPS w/PIN Code, and press WPS w/PIN Code.

5️⃣ When Network I/F switched to Wireless is displayed, press Yes to accept. This will start the wireless setup wizard. To cancel, press No.

6️⃣ The LCD will show an 8 digit PIN and the machine starts searching for a WLAN access point/router for up to 5 minutes.

7️⃣ Using a computer that is on the network, type "http://access point's IP address/" into your browser. (Where "access point's IP address" is the IP address of the device that is used as the Registrar [1].) Go to the WPS (Wi-Fi Protected Setup) setting page and input the PIN which the LCD shows in 6️⃣ to the Registrar and follow the on-screen instructions.

[1] The Registrar is normally the WLAN access point/router.

NOTE

The setting page may be different, depending on the brand of WLAN access point/router. See the instruction manual that came with your WLAN access point/router.

If you are using your Windows Vista® or Windows® 7 computer as a Registrar, complete the following steps.

NOTE

To use a Windows Vista® or Windows® 7 computer as a Registrar, you need to register it to your network in advance. See the instruction manual that came with your WLAN access point/router.

1 (Windows Vista®)

Click , **Network**, and then **Add a wireless device**.

(Windows® 7)

Click , **Control Panel**, **Network and Internet**, and then **Add a wireless device to the network**.

2 Choose your machine and click **Next**.

3 Input the PIN from the printed page and then click **Next**.

4 Choose your network that you want to connect to, and then click **Next**.

5 Click **Close**.

8 A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

Configuration using the machine's control panel Setup Wizard

You can use the machine's control panel to configure your wireless network settings. By using the control panel `Setup Wizard` function, you can easily connect your Brother machine to your wireless network.

IMPORTANT

> **You must know your wireless network settings before you proceed with this installation.**
>
> If you have previously configured the wireless settings of the machine, you must reset the LAN settings before you can configure the wireless settings again.
>
> To reset the LAN settings, see *Restoring the network settings to factory default* on page 38.

Manual configuration from the control panel

(For MFC-J2510/J4510DW/J4710DW)

1. Before configuring your machine we recommend you write down your wireless network settings. You will need this information before you continue with the configuration.

Item	Record the current wireless network settings
SSID (Network Name):	
Network Key	

2. Press 🔧.

3. Press `Wi-Fi`.

4. Press `Setup Wizard`.

5. When `Switch Network interface to wireless?` is displayed, press `Yes` to accept.
   This will start the wireless setup wizard.
   To cancel, press `No`.

6. The machine will search for your network and display a list of available SSIDs.
   If a list of SSIDs is displayed, swipe up or down to choose the SSID you wrote down in step ❶. Select the SSID you want to connect with. Press `OK`.
   If the wireless access point/router of the selected SSID supports WPS and the machine asks to use WPS, go to step ❼.
   If the machine asks you to enter a Network Key, go to step ❽.
   Otherwise, go to step ❾.

NOTE

> When the SSID is not broadcast, see *Configuring your machine when the SSID is not broadcast* on page 23.

7️⃣ Press `Yes` to connect to your machine using WPS. (If you press `No` to continue manual setting, go to step ❽ to enter a Network Key.)
When the LCD shows `Start WPS`; press the WPS button on your wireless access point/router and then press `Next` to proceed. Go to step ❾.

8️⃣ Enter the Network Key you wrote down in step ❶. (For information on how to enter text, see the Quick Setup Guide.)
Press `OK` when you have entered all the characters, then press `Yes` to apply your settings.

9️⃣ The machine starts to connect to the wireless device you have chosen.

🔟 A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

1️⃣ Before configuring your machine we recommend you write down your wireless network settings. You will need this information before you continue with the configuration.

Item	Record the current wireless network settings
SSID (Network Name):	
Network Key	

2️⃣ Press `Settings`.

3️⃣ Press ⌃ or ⌄ to display `Network` and then press `Network`.

4️⃣ Press `WLAN`.

5️⃣ Press `Setup Wizard`.

6️⃣ When `Network I/F switched to Wireless` is displayed, press `Yes` to accept.
This will start the wireless setup wizard.
To cancel, press `No`.

7️⃣ The machine will search for your network and display a list of available SSIDs.
If a list of SSIDs is displayed, press ⌃ or ⌄ to choose the SSID you wrote down in step ❶. Select the SSID you want to connect with.

If the wireless access point/router of the selected SSID supports WPS and the machine asks to use WPS, go to step ⑧.
If the machine asks you to enter a Network Key, go to step ⑨.
Otherwise, go to step ⑩.

NOTE

When the SSID is not broadcast, see *Configuring your machine when the SSID is not broadcast* on page 23.

⑧ Press Yes to connect to your machine using WPS. (If you choose No (Manual) to continue manual setting, go to step ⑨ to enter a Network Key.)
When the LCD shows Start WPS, press the WPS button on your wireless access point/router, and then press Next to proceed. Go to step ⑩.

⑨ Enter the Network Key you wrote down in step ①. (For information on how to enter text, see the Quick Setup Guide.)
Press OK when you have entered all the characters, then press Yes to apply your settings.

⑩ The machine starts to connect to the wireless device you have chosen.

⑪ A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

Configuring your machine when the SSID is not broadcast

(For MFC-J2510/J4510DW/J4710DW)

1 Before configuring your machine we recommend you write down your wireless network settings. You will need this information before you continue with the configuration.

Check and record the current wireless network settings.

SSID (Network Name):

Communication Mode	Authentication method	Encryption mode	Network key
Infrastructure	Open system	WEP	
		NONE	—
	Shared key	WEP	
	WPA/WPA2-PSK	AES	
		TKIP [1]	

[1] TKIP is supported for WPA-PSK only.

For example:

SSID (Network Name):
HELLO

Communication Mode	Authentication method	Encryption mode	Network key
Infrastructure	WPA2-PSK	AES	12345678

NOTE

If your access point/router uses WEP encryption, enter the key used as the first WEP key. Your Brother machine supports the use of the first WEP key only.

2 Press ▯.

3 Press All Settings.

4 Press Network.

5 Press WLAN.

6 Press Setup Wizard.

7 When Switch Network interface to wireless? is displayed, press Yes to accept.
This will start the wireless setup wizard.
To cancel, press No.

⑧ The machine will search for your network and display a list of available SSIDs.
Swipe up or down to display <New SSID>. Press <New SSID>, and then press OK.

⑨ Enter the SSID name. (For information on how to enter text, see the *Quick Setup Guide*.)
Press OK.

⑩ Press Infrastructure when instructed.

⑪ Choose the Authentication method.
Do one of the following:
If you choose Open System, go to step ⑫.
If you choose Shared Key, go to step ⑬.
If you choose WPA/WPA2-PSK, go to step ⑭.

⑫ Choose the Encryption type None or WEP.
Do one of the following:
If you choose None, go to step ⑯.
If you choose WEP, go to step ⑬.

⑬ Enter the WEP key you wrote down in step ❶ on page 23. Press OK. Go to step ⑯. (For information on how to enter text, see the *Quick Setup Guide*.)

⑭ Choose the Encryption type, TKIP or AES. Go to step ⑮.

⑮ Enter the WPA key you wrote down in step ❶ on page 23 and press OK. Go to step ⑯. (For information on how to enter text, see the *Quick Setup Guide*.)

⑯ To apply the settings, press Yes. To cancel, press No.
Do one of the following:
If you choose Yes, go to step ⑰.
If you choose No, go back to step ⑧.

⑰ The machine starts to connect to the wireless device you have chosen.

⑱ A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

a Before configuring your machine we recommend you write down your wireless network settings. You will need this information before you continue with the configuration.

Check and record the current wireless network settings.

SSID (Network Name):

Communication Mode	Authentication method	Encryption mode	Network key
Infrastructure	Open system	WEP	
		NONE	—
	Shared key	WEP	
	WPA/WPA2-PSK	AES	
		TKIP [1]	

[1] TKIP is supported for WPA-PSK only.

For example:

SSID (Network Name):
HELLO

Communication Mode	Authentication method	Encryption mode	Network key
Infrastructure	WPA2-PSK	AES	12345678

NOTE

If your access point/router uses WEP encryption, enter the key used as the first WEP key. Your Brother machine supports the use of the first WEP key only.

b Press Settings.

c Press ⌃ or ⌄ to display Network and then press Network.

d Press WLAN.

e Press Setup Wizard.

f When Network I/F switched to Wireless is displayed, press Yes to accept.
This will start the wireless setup wizard.
To cancel, press No.

g The machine will search for your network and display a list of available SSIDs. Press ⌃ or ⌄ to display <New SSID>, and press <New SSID>.

h Enter the SSID name. (For information on how to enter text, see the *Quick Setup Guide*.)
Press OK.

9 Press `Infrastructure` when instructed.

10 Choose and press the Authentication method.
Do one of the following:
If you choose `Open System`, go to step **11**.
If you choose `Shared Key`, go to step **12**.
If you choose `WPA/WPA2-PSK`, go to step **13**.

11 Choose and press the Encryption type `None` or `WEP`.
Do one of the following:
If you choose `None`, go to step **15**.
If you choose `WEP`, go to step **12**.

12 Enter the WEP key you wrote down in step **1** on page 25. Press `OK`. Go to step **15**. (For information on how to enter text, see the *Quick Setup Guide*.)

13 Choose and press the Encryption type, `TKIP` or `AES`. Go to step **14**.

14 Enter the WPA key you wrote down in step **1** on page 25 and press `OK`. Go to step **15**. (For information on how to enter text, see the *Quick Setup Guide*.)

15 To apply the settings, press `Yes`. To cancel, press `No`.
Do one of the following:
If you choose `Yes`, go to step **16**.
If you choose `No`, go back to step **7**.

16 The machine starts to connect to the wireless device you have chosen.

17 A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

Configuration in Ad-hoc Mode

Configure the wireless settings

(For MFC-J2510/J4510DW/J4710DW)

❶ Before configuring your machine we recommend you write down your wireless network settings. You will need this information before you continue with the configuration.

Check and record the current wireless network settings.

NOTE

The wireless network settings of the computer you are connecting with must be set to Ad-hoc mode with an SSID already configured. For instructions on how to configure your computer to Ad-hoc mode please see the information included with your computer or contact your network administrator.

SSID (Network Name):

Communication Mode	Encryption mode	Network key
Ad-hoc	WEP	
	NONE	—

For example:

SSID (Network Name):
HELLO

Communication Mode	Encryption mode	Network key
Ad-hoc	WEP	12345678

❷ Press ▮▮.

❸ Press All Settings.

❹ Press Network.

❺ Press WLAN.

❻ Press Setup Wizard.

❼ When Switch Network interface to wireless? is displayed, press Yes to accept.
This will start the wireless setup wizard.
To cancel, press No.

⑧ The machine will search for your network and display a list of available SSIDs.
Swipe up or down to display `<New SSID>`. Press `<New SSID>`, and then press `OK`.

⑨ Enter the SSID name. (For information on how to enter text, see the *Quick Setup Guide*.)
Press `OK`.

⑩ Press `Ad-hoc` when instructed.

⑪ Choose the Encryption type `None` or `WEP`.
Do one of the following:
If you choose `None`, go to step ⑬.
If you choose `WEP`, go to step ⑫.

⑫ Enter the WEP key you wrote down in step ① on page 27. Press `OK`. Go to step ⑬. (For information on how to enter text, see the *Quick Setup Guide*.)

⑬ To apply the settings, press `Yes`. To cancel, press `No`.
Do one of the following:
If you choose `Yes`, go to step ⑭.
If you choose `No`, go back to step ⑧.

⑭ The machine starts to connect to the wireless device you have chosen.

⑮ A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

① Before configuring your machine we recommend you write down your wireless network settings. You will need this information before you continue with the configuration.

Check and record the current wireless network settings.

NOTE

The wireless network settings of the computer you are connecting with must be set to Ad-hoc mode with a SSID already configured. For instructions on how to configure your computer to Ad-hoc mode please see the information included with your computer or contact your network administrator.

SSID (Network Name):

Communication Mode	Encryption mode	Network key
Ad-hoc	WEP	
	NONE	—

For example:

SSID (Network Name):
HELLO

Communication Mode	Encryption mode	Network key
Ad-hoc	WEP	12345678

b Press Settings.

c Press ∧ or ∨ to display Network and then press Network.

d Press WLAN.

e Press Setup Wizard.

f When Network I/F switched to Wireless is displayed, press Yes to accept.
This will start the wireless setup wizard.
To cancel, press No.

g The machine will search for your network and display a list of available SSIDs. Press ∧ or ∨ to display
<New SSID>, and press <New SSID>.

h Enter the SSID name. (For information on how to enter text, see the *Quick Setup Guide*.)
Press OK.

i Press Ad-hoc when instructed.

j Choose and press the Encryption type None or WEP.
Do one of the following:
If you choose None, go to step l.
If you choose WEP, go to step k.

k Enter the WEP key you wrote down in step a on page 28. Press OK. Go to step l. (For information on
how to enter text, see the *Quick Setup Guide*.)

l To apply the settings, press Yes. To cancel, press No.
Do one of the following:
If you choose Yes, go to step m.
If you choose No, go back to step g.

m The machine starts to connect to the wireless device you have chosen.

29

14 A connection result message appears for 60 seconds on the LCD and a wireless LAN report will automatically be printed. If the connection failed, check the error code on the printed report.
See Quick Setup Guide: *Troubleshooting*

OK! **(Windows®)**

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please choose Install MFL-Pro Suite from the CD-ROM menu.

(Macintosh)

You have completed the wireless network setup. If you would like to continue installing drivers and software necessary for operating your device, please double-click Start Here OSX in the CD-ROM.

3

4 Control panel setup

Network settings

The `Network` setting selections of the control panel allow you to set up the Brother machine for your network configuration. Press ![icon],`All Settings` and then press `Network`. Proceed to the setting selection you wish to configure. (See *Function table and default factory settings* on page 41.)

Please note that the machine is supplied with the BRAdmin Light utility [1], Web Based Management or Remote Setup [2] applications, which can also be used to configure many aspects of the network. (See *Other Management Utilities* on page 8.)

[1] For Macintosh users, you can download Brother's latest BRAdmin Light utility from http://solutions.brother.com/.

[2] Not available for DCP models.

TCP/IP

If you connect the machine with an Ethernet cable to your network, use the `Wired LAN` setting selections. If you connect the machine to a wireless network, use the `WLAN` setting selections.

BOOT Method

This selection controls how the machine obtains an IP address.

Auto

In this mode the machine will scan the network for a DHCP server. If it can find one, and if the DHCP server is configured to allocate an IP address to the machine, then the IP address supplied by the DHCP server will be used. If no DHCP server is available, then the machine will scan for a BOOTP server. If a BOOTP server is available, and it is configured correctly, the machine will take its IP address from the BOOTP server. If a BOOTP server is not available, the machine will scan for a RARP server. If a RARP server also does not answer, the IP Address is set using the APIPA protocol. After the machine is initially powered ON, it may take a few minutes for the machine to scan the network for a server.

Static

In this mode the machine's IP address must be manually assigned. Once entered the IP address is locked to the assigned address.

NOTE

If you do not want your print server configured via DHCP, BOOTP or RARP, you must set the `BOOT Method` to `Static` so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems. To change the `BOOT Method`, use the machine's control panel, BRAdmin Light utility, Web Based Management or Remote Setup.

IP Address

This field displays the current IP address of the machine. If you have chosen a `BOOT Method` of `Static`, enter the IP address that you wish to assign to the machine (check with your network administrator for a

suitable IP address to use). If you have chosen a method other than `Static`, the machine will attempt to determine its IP address using the DHCP or BOOTP protocols. The default IP address of your machine will probably be incompatible with the IP address numbering scheme of the network it will be connected to. We recommend that you contact your network administrator for a suitable IP address.

Subnet Mask

This field displays the current subnet mask used by the machine. If you are not using DHCP or BOOTP to obtain the subnet mask, enter the desired subnet mask. Check with your network administrator for the subnet mask to use.

Gateway

This field displays the current gateway or router address used by the machine. If you are not using DHCP or BOOTP to obtain the gateway or router address, enter the address you wish to assign. If you do not have a gateway or router, leave this field blank. Check with your network administrator if you are unsure.

Node Name

You can register the machine name on the network. This name is often referred to as a NetBIOS name; it will be the name that is registered by the WINS server on your network. Brother recommends the name BRNxxxxxxxxxxxx for a wired network or BRWxxxxxxxxxxxx for a wireless network (where xxxxxxxxxxxx is your machine's MAC Address / Ethernet Address) (up to 15 characters).

NOTE

DCP models cannot change the Node Name from the control panel settings.

WINS Configuration

This selection controls how the machine obtains the IP address of the WINS (Windows® Internet Name Service) server.

Auto

Automatically uses a DHCP request to determine the IP addresses for the primary and secondary WINS servers. You must set the `BOOT Method` to `Auto` or `DHCP` for this feature to work.

Static

Uses a specified IP address for the primary and secondary WINS servers.

WINS Server

Primary WINS Server IP Address

This field specifies the IP address of the primary WINS server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service.

Secondary WINS Server IP Address

This field specifies the IP address of the secondary WINS server. It is used as a backup to the Primary WINS server address. If the Primary server is unavailable, the machine can still register itself with a secondary server. If set to a non-zero value, the machine will contact this server to register its name with the Windows® Internet Name Service. If you have a primary WINS server, but no secondary WINS server, simply leave this field blank.

DNS Server

Primary DNS Server IP Address

This field specifies the IP address of the primary DNS (Domain Name System) server.

Secondary DNS Server IP Address

This field specifies the IP address of the secondary DNS server. It is used as a backup to the Primary DNS server address. If the Primary server is unavailable, the machine will contact the Secondary DNS server.

APIPA

The setting of `On` will cause the print server to automatically allocate a Link-Local IP address in the range (169.254.1.0 - 169.254.254.255) when the print server cannot obtain an IP address through the `BOOT Method` you have set (see *BOOT Method* on page 31). Choosing `Off` means the IP address doesn't change, when the print server cannot obtain an IP address through the `BOOT Method` you have set.

IPv6

This machine is compatible with the Internet protocol IPv6. If you want to use the IPv6 protocol, choose `On`. The default setting for IPv6 is `Off`. For more information on the IPv6 protocol, visit http://solutions.brother.com/.

NOTE
- If you set IPv6 to `On`, use the On/Off button to turn the machine off and back on to enable this protocol.
- After you choose IPv6 `On`, this setting will be applied to both the wired and wireless LAN interface.

Setup Wizard (wireless network only)

The `Setup Wizard` guides you through the wireless network configuration. For more information, see the *Quick Setup Guide* or *Configuration using the machine's control panel Setup Wizard* on page 20.

WPS (Wi-Fi Protected Setup)/AOSS™ (wireless network only)

If your WLAN access point/router supports either Wi-Fi Protected Setup (PBC [1]) or AOSS™, you can configure the machine easily without knowing your wireless network settings. (See the *Quick Setup Guide* or *One push configuration using WPS (Wi-Fi Protected Setup™) or AOSS™* on page 14.)

[1] Push Button Configuration

WPS w/PIN Code (wireless network only)

If your WLAN access point/router supports Wi-Fi Protected Setup (PIN Method), you can configure the machine easily without a computer. (See *Configuration using the PIN Method of WPS (Wi-Fi Protected Setup)* on page 16.)

WLAN Status (wireless network only)

Status

This field displays the current wireless network status.

Signal

This field displays the current wireless network signal strength.

SSID

This field displays the current wireless network SSID. The display shows up to 32 characters of the SSID name.

Comm.Mode

This field displays the current wireless network communication mode.

Ethernet (wired network only)

The Ethernet link mode, Auto, allows the print server to operate in 100BASE-TX full or half duplex, or in 10BASE-T full or half duplex mode by auto negotiation.

NOTE
If you set this value incorrectly, you may not be able to communicate with your print server.

MAC Address

The MAC address is a unique number assigned for the machine's network interface. You can check your machine's MAC address from the control panel.

E-mail / IFAX (For MFC models) (Available when IFAX is downloaded)

These settings have six selections: `Mail Address`, `Setup Server`, `Setup Mail RX`, `Setup Mail TX`, `Setup Relay` and `Manual POP3 Receive`. As this section requires you to enter a lot of text characters, you may find that it is more convenient to use Web Based Management and your favorite web browser (see *Web Based Management* on page 46). The settings must be configured for the IFAX feature to work. (For more details about Internet fax, see *Internet fax (For MFC models) (Available as a download)* on page 59.)

You can also access the character you want by repeatedly pressing the appropriate number key using the machine's control panel. (For entering text, see the *Quick Setup Guide*.)

Mail Address

You can set your machine's E-mail address.

Setup Server

SMTP Server

This field displays the node name or IP address of an SMTP mail server (outgoing E-mail server) on your network.

(Ex, "mailhost.brothermail.net" or "192.000.000.001")

SMTP Port

This field displays the SMTP port number (for outgoing E-mails) on your network.

Auth. for SMTP

You can specify the security method for E-mail notification. (For details on the security methods for E-mail notification, see *Sending an E-mail securely* on page 72.)

POP3 Server

This field displays the node name or IP address of the POP3 server (incoming E-mail server) used by the Brother machine. This address is necessary for the Internet fax features to function correctly.

(Ex, "mailhost.brothermail.net" or "192.000.000.001")

POP3 Port

This field displays the POP3 port number (for incoming E-mails) used by the Brother machine.

Mailbox Name

You can specify a mailbox name on the POP3 server where the Internet print jobs are to be retrieved.

Mailbox Pwd

You can specify the password for the POP3 server account where the Internet print jobs are to be retrieved.

NOTE

To set no password, enter a single space.

APOP

You can enable or disable the APOP (Authenticated Post Office Protocol).

Setup Mail RX

Auto Polling

When set to `On`, the machine automatically checks the POP3 server for new messages.

Poll Frequency

Sets the interval for checking for new messages on the POP3 server (default is `10Mins`).

For Touchscreen models, you can choose the interval from `1Min`/`3Mins`/`5Mins`/`10Mins`/`30Mins`/`60Mins`, if `Auto Polling` is set to `On`.

Header

This selection allows the contents of the mail header to be printed when the received message is printed.

Delete Error Mail

When set to `On`, the machine automatically deletes error mails that the machine cannot receive from the POP3 server.

Notification

The notification feature allows a confirmation of receipt message to be transmitted to the sending station when the Internet Fax has been received.

This feature only works on Internet Fax machines that support the "MDN" specification.

Setup Mail TX

Sender Subject

This field displays the subject that is attached to the Internet fax data being sent from the Brother machine to a computer (default is "`Internet Fax Job`").

Size Limit

Some E-mail servers do not allow you to send large E-mail documents (the System Administrator will often place a limit on the maximum E-mail size). With this function enabled, the machine will display `Out of Memory` when trying to send E-mail documents over 1 megabyte in size. The document will not be sent and an error report will be printed. The document you are sending should be separated into smaller documents that will be accepted by the mail server. (For your information, a 42 page document based on the ITU-T Test Chart #1 test chart is approximately 1 megabyte in size.)

Notification

The notification feature allows a confirmation of receipt message to be transmitted to the sending station when the Internet Fax has been received.

This feature only works on Internet Fax machines that support the "MDN" specification.

Setup Relay

Relay Broadcast

This function allows the machine to receive a document over the Internet, and then relay it to other fax machines through conventional analog landlines.

Relay Domain

You can register the Domain Names (Max. 5) that are allowed to request a Relay Broadcast.

Relay Report

A Relay Broadcast Report can be printed at the machine that will act as a Relay Station for all Relay Broadcasts.

Its primary function is to print reports of any relayed broadcasts that have been sent through the machine.

NOTE

- For more information on Relay Broadcast, see *Relay broadcasting* on page 65.
- In order to use the Relay Report function, you must assign the relay domain in the "Trusted Domains" section of the Relay function settings.

Network I/F

You can choose the network connection type, wired network connection or wireless network connection. If you want to use the wired network connection, choose `Wired LAN`, and if you want to use the wireless network connection, choose `WLAN`. You can only have one network connection type active at a time.

Restoring the network settings to factory default

You can reset the print server back to its default factory settings (resetting all information such as the password and IP address information).

NOTE

- This function restores all wired and wireless network settings to the factory default.

- You can also reset the print server back to its factory default settings using the BRAdmin applications or Web Based Management. (For more information, see *Other Management Utilities* on page 8.)

(For MFC-J2510/J4510DW/J4710DW)

1 Press ▯▮.

2 Press `All Settings`.

3 Press `Network`.

4 Press `Network Reset`.

5 `Reset Network?` will be displayed. Press `Yes`.

6 `Reboot OK?` will be displayed. Press `Yes` for 2 seconds to confirm.

7 The machine will re-start.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

1 Press `Settings`.

2 Press ⌃ or ⌄ to display `Network` and then press `Network`.

3 Press ⌃ or ⌄ to display `Network Reset` and then press `Network Reset`.

4 Press `Yes`.

5 Press `Yes` for 2 seconds to confirm.

Printing the Network Configuration Report

The Network Configuration Report prints a report listing the current network configuration including the network print server settings.

NOTE

Node Name: The Node Name appears in the Network Configuration Report. The default Node Name is "BRNxxxxxxxxxxxx" for a wired network or "BRWxxxxxxxxxxxx" for a wireless network ("xxxxxxxxxxxx" is your machine's MAC Address / Ethernet Address).

(For MFC-J2510/J4510DW/J4710DW)

1. Press ⚒.

2. Press `All Settings`.

3. Press `Print Reports`.

4. Press `Network Configuration`.

5. Press `OK`.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

1. Press `Settings`.

2. Press ∧ or ∨ to display `Print Reports` and then press `Print Reports`.

3. Press ∧ or ∨ to display `Network Config` and then press `Network Config`.

4. Press `Start`.

Printing the WLAN Report

The WLAN Report prints your machine's wireless status report. If the wireless connection failed, check the error code on the printed report.

See Quick Setup Guide: *Troubleshooting*

(For MFC-J2510/J4510DW/J4710DW)

1 Press ∰.

2 Press All Settings.

3 Press Print Reports.

4 Press WLAN Report.

5 Press OK.

(For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW)

1 Press Settings.

2 Press ∧ or ∨ to display Print Reports and then press Print Reports.

3 Press ∧ or ∨ to display WLAN Report and then press WLAN Report.

4 Press Start.

NOTE

If the WLAN Report does not print, check your machine for errors. If there are no visible errors, wait for a while and then start from step **1** to try and print the report again.

Function table and default factory settings

Level1	Level2	Level3		Options
Network	Wired LAN	TCP/IP	BOOT Method	**Auto**/Static/RARP/BOOTP/DHCP
			IP Address	[000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]** [1]
			Subnet Mask	[000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]** [1]
			Gateway	[000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]**
			Node Name	**BRNXXXXXXXXXXXX**= (your machine's MAC Address / Ethernet Address) (up to 15 characters)
			WINS Configuration (WINS Config)	**Auto**/Static
			WINS Server	Primary/Secondary [000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]**
			DNS Server	Primary/Secondary [000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]**
			APIPA	**On**/Off
			IPv6	On/**Off**
		Ethernet		**Auto**/100B-FD/100B-HD/10B-FD/10B-HD
		MAC Address		

Level1	Level2	Level3		Options
Network (Continued)	WLAN	TCP/IP	BOOT Method	**Auto**/Static/RARP/BOOTP/DHCP
			IP Address	[000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]** [1]
			Subnet Mask	[000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]** [1]
			Gateway	[000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]**
			Node Name	**BRWXXXXXXXXXXXX**= (your machine's MAC Address / Ethernet Address) (up to 15 characters)
			WINS Configuration (WINS Config)	**Auto**/Static
			WINS Server	Primary/Secondary [000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]**
			DNS Server	Primary/Secondary [000-255].[000-255].[000-255].[000-255] **[000].[000].[000].[000]**
			APIPA	**On**/Off
			IPv6	On/**Off**
		Setup Wizard	—	(Choose SSID from list or manually add SSID)
		WPS/AOSS	—	
		WPS w/PIN Code	—	
		WLAN Status	Status	(Examples) Active(11b)/Active(11g)/Active(11n)/AOSS Active/Connection Fail
			Signal	Strong/Medium/Weak/None
			SSID	(Shows SSID with up to 32 digits)
			Comm. Mode	(Examples) Ad-hoc/Infrastructure
		MAC Address		

Level1	Level2	Level3		Options
Network (Continued)	Wi-Fi Direct [3]	Push Button	—	—
		PIN Code	—	—
		Manual	—	—
		Group Owner	—	On **Off***
		Device Information	Device Name	—
			SSID	—
			IP Address	—
		Status Information	Status	G/O Active (**) **** = number of devices** Client Active Not Connected Off Wired LAN Active
			Signal	Strong Medium Weak None (When Group Owner is On, the signal is set to Strong.)
		I/F Enable	—	On Off
	E-mail/IFAX (Email/IFax) [4]	Mail Address [5] Email Address [6]	—	
		Setup Server	SMTP Server	Name (up to 30 characters) IP Address [000-255].[000-255]. [000-255].[000-255]
			SMTP Port	[00001-65535]
			Auth. for SMTP	**None**/SMTP-AUTH/POP bef.SMTP

4

Level1	Level2	Level3		Options
Network (Continued)	E-mail/IFAX (Email/IFax) [4] (Continued)	Setup Server (Continued)	POP3 Server	Name (up to 30 characters)
				IP Address [000-255].[000-255].[000-255].[000-255]
			POP3 Port	[00001-65535]
			Mailbox Name	—
			Mailbox Password (Mailbox Pwd)	—
			APOP	On/**Off**
		Setup Mail RX	Auto Polling [5]	Auto Polling (Options) **On**/Off
				(When On chosen) Poll Frequency (Options) 1Min/ 3Mins/ 5Mins/**10Mins**/ 30Mins/ 60Mins
			Auto Polling [6]	On/Off (When On chosen) Poll Frequency 1Min/ 3Mins/ 5Mins/**10Mins**/ 30Mins/ 60Mins
			Header	All/Subject+From+To/**None**
			Delete Error Mail (Del Error Mail)	**On**/Off
			Notification	On/MDN/**Off**
		Setup Mail TX	Sender Subject	—
			Size Limit	On/**Off**
			Notification	On/**Off**
		Setup Relay	Relay Broadcast (Rly Broadcast)	On/**Off**
			Relay Domain	—
			Relay Report	On/**Off**
		Manual POP3 Receive	—	—

Level1	Level2	Level3		Options
Network (Continued)	Web Connect Settings [2]	Proxy Settings	Proxy Connection	On/Off
			Address	—
			Port	—
			User Name	—
			Password	—
	Network I/F			**Wired LAN**/WLAN
	Network Reset			Yes/No

■ The factory settings are shown in bold.

[1] On connection to the network, the machine will automatically set the IP address and Subnet Mask to values appropriate for your network.

[2] For details, please see the Web Connect Guide located on the Manual download page for your model at the Brother Solutions Center (http://solutions.brother.com/).

[3] For details, please see the Wi-Fi Direct Guide located on the Manuals download page for your model at the Brother Solutions Center (http://solutions.brother.com/).

[4] Available after IFAX is downloaded.

[5] For MFC-J2510/J4510DW/J4710DW

[6] For DCP-J4110DW, MFC-J2310/J4310DW/J4410DW/J4610DW

5

Web Based Management

Overview

A standard Web Browser can be used to manage your machine using the HTTP (Hyper Text Transfer Protocol). You can get the following information from a machine on your network using a web browser.

■ Machine status

■ Change Fax configuration items, such as General Setup, Quick-Dial settings and Remote Fax

■ Change network settings such as TCP/IP information

■ Configure Secure Function Lock 2.0

■ Configure Scan to FTP

■ Configure Scan to Network

■ Configure LDAP

■ Software version information of the machine and print server

■ Change network and machine configuration details

NOTE

We recommend Microsoft® Internet Explorer® 8.0/9.0 for Windows® and Safari 5.0 for Macintosh. Please also make sure that JavaScript and Cookies are always enabled in whichever browser you use.

You must use the TCP/IP protocol on your network and have a valid IP address programmed into the print server and your computer.

How to configure the machine settings using Web Based Management (web browser)

A standard web browser can be used to change your print server settings using the HTTP (Hyper Text Transfer Protocol).

1. Start your web browser.

2. Type "`http://machine's IP address/`" into your browser's address bar (where "`machine's IP address`" is the IP address of your machine).

   ■ For example:

   `http://192.168.1.2/`

3. You can now change the print server settings.

NOTE

• If you are using a Domain Name System or enable a NetBIOS name, you can enter another name such as "Shared_Printer" instead of the IP address.

   • For example:

   `http://Shared_Printer/`

   If you enable a NetBIOS name, you can also use the node name.

   • For example:

   `http://brnxxxxxxxxxxxx/`

   The NetBIOS name can be seen in the Network Configuration Report. (To learn how to print the Network Configuration Report, see *Printing the Network Configuration Report* on page 39.)

• For Macintosh users, you can have easy access to the Web Based Management System by clicking the machine icon on the **Status Monitor** screen. For more information, see the *Software User's Guide*.

• If you have changed the protocol settings, restart the machine after clicking **Submit** to activate the configuration.

Setting a password

We recommend setting a login password to prevent unauthorized access to the Web Based Management.

1. Click **Administrator**.

2. Enter the password you want to use (up to 32 characters).

3. Re-enter the password in the **Confirm New Password** box.

4. Click **Submit**.
   From the next time you access the Web Based Management, enter the password in the **Login** box and then click ➡.
   After configuring the settings, logout by clicking ➡.

NOTE

You can also set a password by clicking **Please configure the password** on the machine's web page if you are setting a login password.

Secure Function Lock 2.0

Secure Function Lock 2.0 from Brother helps you to save money and increase security by restricting the functions available on your Brother machine.

Secure Function Lock allows you to configure passwords for selected users. For example, you can grant users access to some or all of these functions, or restrict them to a page limit. This means that only authorized people can use certain functions of the machine.

You can configure and change the following Secure Function Lock 2.0 settings using BRAdmin Professional 3 or Web Based Management.

- ■ **Print** [1]
- ■ **PCC**
- ■ **Copy**
- ■ **Color Print**
- ■ **Page Limit**
- ■ **Fax TX**
- ■ **Fax RX**
- ■ **Scan**
- ■ **Page Counter**
- ■ **Web Connect**

[1] If you register the PC user login names, you can restrict PC print without the user entering a password. For more detail, see *Restricting PC print by PC user login name* on page 50.

How to configure the Secure Function Lock 2.0 settings using Web Based Management (web browser)

Basic configuration

❶ Click **Administrator** on the machine's web page, and then click **Secure Function Lock**.

❷ Choose **On** from **Function Lock**.

NOTE

To configure Secure Function Lock for the first time through the embedded web server, you have to enter the Administrator Password (four digit number).

❸ Enter an alphanumeric group name or user name up to 15 digits in the **ID Number/Name** box and then enter a four-digit password in the **PIN** box.

❹ Uncheck the functions that you want to restrict in the **Print Activities** boxes or the **Others** boxes.
If you want to configure the maximum page count, check the **On** box in **Page Limit**, and then enter the number in the **Max.** box.

5 Click **Submit**.

NOTE

If you want to restrict the PC printing by PC login user name, click **PC Job Restriction by Login Name** and configure the settings. (See *Restricting PC print by PC user login name* on page 50.)

Scanning when using Secure Function Lock 2.0

The Secure Function Lock 2.0 feature allows the administrator to restrict which users are allowed to scan. When the scan feature is set to off for public users, only users who have scan selected in the check box will be able to scan. To push scan from the control panel of the machine users must enter their PIN to access the scan mode. To pull scan from their computer, restricted users must also enter their PIN on the control panel of the machine before they can scan from their computer. If the PIN is not entered at the machine's control panel the user will get an error message on their computer when they attempt to pull scan.

Setting up public mode

You can set up the public mode to restrict what functions are available for public users. Public users do not need to enter a password to access the features made available through this setting.

1 Uncheck the check box for the function that you want to restrict in the **Public Mode** box.

2 Click **Submit**.

Restricting PC print by PC user login name

By configuring this setting, the machine can authenticate by PC user login name to allow a print job from a registered computer.

1 Click **PC Job Restriction by Login Name**.

2 Choose **On** from **PC Job Restriction**.

3 Choose the ID Number you set in step **3** of the *Basic configuration* on page 49, then for each Login Name from the **ID Number** pull-down list, enter the PC user login name in the **Login Name** box.

4 Click **Submit**.

NOTE

If you want to restrict PC print per group, choose the same ID Number for each PC login name you want in the group.

Other features

You can set up the following features in Secure Function Lock 2.0:

■ **All Counter Reset**

You can reset the page counter by clicking **All Counter Reset**.

■ **Last Counter Record**

The machine retains the page count after the counter has been reset.

■ **Export to CSV file**

You can export the current page counter including **ID Number/Name** information as a CSV file.

■ **Counter Auto Reset**

You can automatically reset the page counters by configuring the time interval based on Daily, Weekly or Monthly settings, during the period the machine is turned on.

Synchronize with SNTP server

SNTP is the protocol used to synchronize the time used by the machine for Authentication with the SNTP time server (this time is not the time displayed on the LCD of the machine). You can synchronize the time used by the machine on a regular basis with the Coordinated Universal Time (UTC) provided by the SNTP time server.

NOTE

This function is not available in some countries.

a Click **Network**, and then click **Protocol**.

b Select the **SNTP** check box to activate the setting.

c Click **Advanced Setting**.

■ **Status**

Displays whether the SNTP server settings are enabled or disabled.

■ **SNTP Server Method**

Choose **AUTO** or **STATIC**.

• **AUTO**

If you have a DHCP server in your network, the SNTP server will automatically obtain the address from that server.

• **STATIC**

Enter the address you want to use.

■ **Primary SNTP Server Address**, **Secondary SNTP Server Address**

Enter the server address (up to 64 characters).

The Secondary SNTP server address is used as a backup to the Primary SNTP server address. If the Primary server is unavailable, the machine will contact the Secondary SNTP server. If you have a Primary SNTP server, but no Secondary SNTP server, simply leave this field at the factory default setting.

■ **Primary SNTP Server Port**, **Secondary SNTP Server Port**

Enter the Port number (1 to 65535).

The Secondary SNTP server port is used as a backup to the Primary SNTP server port. If the Primary port is unavailable, the machine will contact the Secondary SNTP port. If you have a Primary SNTP port, but no Secondary SNTP port, simply leave this field at the factory default setting.

■ **Synchronization Interval**

Enter the number of hour(s) between server synchronization attempts (1 to 168 hours).

NOTE

- You must configure **Date&Time** to synchronize the time used by the machine with the SNTP time server. Click **Date&Time>>** and then configure Date and Time on the **General** screen. You can also configure the Date and Time from the machine's control panel.

- Choose the **Synchronize with SNTP server** check box. You also need to verify your time zone settings correctly. Choose the time difference between your location and UTC from the **Time Zone** pull-down list. For example, the time zone for Eastern Time in the USA and Canada is UTC-05:00.

■ **Synchronization Status**

You can confirm the latest synchronization status.

d Click **Submit** to apply the settings.

Changing the Scan to FTP configuration using a web browser

Scan to FTP allows you to scan a document directly to an FTP server on your local network or on the Internet.

See the *Software User's Guide* for more details on Scan to FTP.

1️⃣ Click **Scan** on the machine's web page, and then click **Scan to FTP/Network**.

2️⃣ Choose **FTP** in the profile numbers (1 to 5) you want to use for Scan to FTP settings.
You can also store two user defined file names that can be used for creating an FTP Server Profile in addition to the seven preset file names in **Create a User Defined File Name**. A maximum of 15 characters can be entered in each of the two fields.

3️⃣ Click **Submit**.

4️⃣ Click **Scan to FTP/Network Profile** on the **Scan** page. Click the profile number you want to configure. Now you can configure and change the following Scan to FTP settings using a web browser.

- **Profile Name** (Up to 15 characters)
- **Host Address** (FTP server address)
- **Username**
- **Password**
- **Store Directory**
- **File Name**
- **Quality**
- **File Type**
- **Remove Background Color**
- **Passive Mode**
- **Port Number**

You can set **Passive Mode** to Off or On depending on your FTP server and network firewall configuration. You can also change the port number used to access the FTP server. The default for this setting is port 21. In most cases these two settings can remain as default.

NOTE

Scan to FTP is available when FTP server profiles are configured using Web Based Management.

5️⃣ After setting, click **Submit**.

Changing the Scan to Network configuration using a web browser

Scan to Network allows you to scan documents directly to a shared folder on a CIFS [1] server located on your local network or the Internet. To enable the CIFS protocol, check the **Network** tab, click **Protocol** in the left-hand column, and select the **CIFS** checkbox.

[1]   The Common Internet File System (CIFS) is the standard way that computer users share files and printers in Windows®.

See the *Software User's Guide* for more details on Scan to Network.

NOTE

Scan to Network is supported by Windows® only.

a Click **Scan** on the machine's web page, and then click **Scan to FTP/Network**.

b Choose **Network** in the profile numbers (1 to 5) you want to use for Scan to Network settings.
You can also store two user defined file names that can be used for creating a Scan to Network Profile in addition to the seven preset file names in **Create a User Defined File Name**. A maximum of 15 characters can be entered in each of the two fields.

c Click **Submit**.

d Click **Scan to FTP/Network Profile** on **Scan** page. Click the profile number you want to configure. Now you can configure and change the following Scan to Network settings using a web browser.

■ **Profile Name** (Up to 15 characters)

■ **Host Address**

■ **Store Directory**

■ **File Name**

■ **Quality**

■ **File Type**

■ **Remove Background Color**

■ **Use PIN for Authentication**

■ **PIN Code**

■ **Username**

■ **Password**

e After setting, click **Submit**.

Changing the LDAP configuration using a web browser (For MFC-J2510/J4510DW/J4710DW) (Available as a download)

You can configure and change the LDAP settings using a web browser.

■ Click **Network** on the web page, and then click **Protocol**.

② Choose the **LDAP** check box and then click **Submit**.

③ Restart the machine to activate the configuration.

④ Make sure the machine is turned on and then choose **Advanced Setting** on the **Protocol** page. Now you can configure and change the following LDAP settings using a web browser.

- **LDAP Server Address**
- **Port** (The default port number is 389.)
- **Search Root**
- **Authentication**
- **Username**
- **Password**
- **Timeout for LDAP**
- **Attribute of Name (Search Key)**
- **Attribute of E-mail**
- **Attribute of Fax Number**

⑤ After setting, make sure that the **Status** is **Enabled**. Then click **Submit**.

NOTE

For the details of each item, see the Help Text in the Web Based Management.

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LDAP operation (For MFC-J2510/J4510DW/J4710DW)

Overview

The LDAP protocol allows you to search for information such as fax numbers and E-mail addresses from your server. When you use Fax, I-Fax or Scan to E-mail server features, you can use the LDAP search to find fax numbers or E-mail addresses.

NOTE

The LDAP Protocol does not support simplified Chinese, traditional Chinese and Korean.

Changing the LDAP configuration using a Browser

LDAP operation using the control panel

After you configure LDAP settings, you can use the LDAP search to find fax numbers or E-mail addresses for the following features.

- Fax sending
- I-Fax sending
- Scan to E-mail server

For Fax sending and I-Fax sending, follow the steps below.

For Scan to E-mail server, see Software User's Guide.

① Load your document.

② Press `Fax`.

③ Press `Address Book`.

④ Press 🔍 to search.

⑤ Enter initial characters for your search by using the buttons on the LCD.

NOTE

• You can enter up to 15 characters.

• For information on how to enter text, see the Quick Setup Guide.

⑥ Press `OK`.

The LDAP search result will be shown on the LCD with 💻 before the local address book search result.

If there is no match on the server and the local address book, the LCD will show
`Results cannot be found..`

⑦ Press ▲ or ▼ to scroll until you find the name you are looking for.
Press the name.

NOTE

To confirm details of the result information, press the name you are looking for, and then press `Detail`.

⑧ If the result includes more than one fax number or E-mail address, press the location where you want to send a fax.

⑨ Press `Apply`.

⑩ Press `Fax Start`.

NOTE

• The LDAP function of this machine supports LDAPv3.

• SSL/TLS is not supported.

• For more information, visit us at http://solutions.brother.com/.

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Internet fax (For MFC models) (Available as a download)

Internet fax Overview

Internet faxing (IFAX) allows you to send and receive fax documents using the Internet as the transport mechanism. Documents are transmitted in E-mail messages as attached TIFF-F files. This means that computers are also able to receive and send documents, providing that the computer has an application that can generate and view TIFF-F files, you can use any TIFF-F viewer application. Any documents sent via the machine will automatically be converted into a TIFF-F format. If you wish to send and receive messages to and from your machine, your mail application on the computer must be able to support the MIME format.
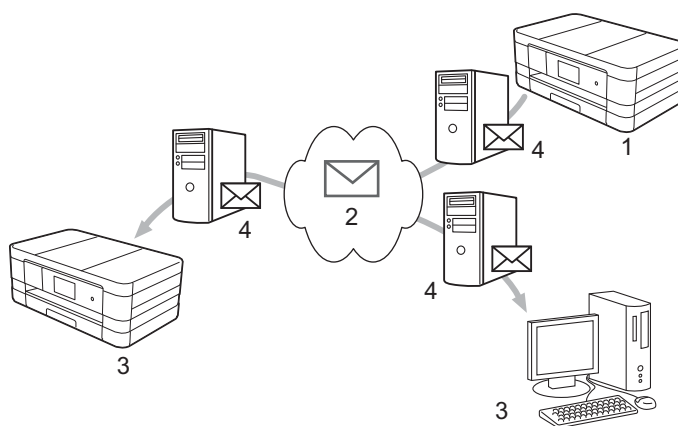
1 Sender

2 Internet

3 Receiver

4 E-mail server

NOTE
- In order to use this function, please download the necessary software from the Brother Solutions Center. (http://solutions.brother.com/)
- You can send/receive IFAX documents in Letter or A4 format and in Black & White only.

■ Forwarding received E-mail and fax messages

You can forward received E-mail or standard fax messages to another E-mail address or fax machine. For more information see *Forwarding received E-mail and fax messages* on page 65.

■ Relay broadcast

If you want to fax a document long distance (such as abroad), the "relay broadcast" function allows you to save the communication fee. This function allows the Brother machine to receive the document over the Internet, and then relay it to other fax machines through conventional telephone lines. For more information see *Relay broadcasting* on page 65.
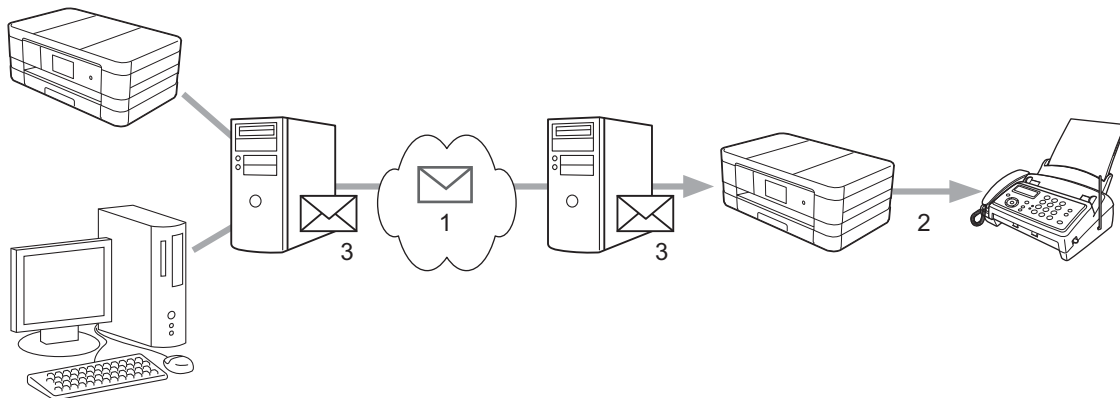
1 **Internet**

2 **Telephone line**

3 **E-mail server**

Important information on Internet fax

Internet fax communication on a LAN system is basically the same as communication via E-mail; however, it is different from fax communication using standard phone lines. The following is important information for using Internet fax:

- Factors such as the receiver's location, structure of the LAN system, and how busy the network (such as the Internet) is, may cause the system to take a long time to send back an error mail (normally 20 sec. to 30 sec.).

- In the case of transmission through the Internet, due to its low level of security, we recommend that you use standard phone lines to send confidential documents.

- If the receiver's mail system is not compatible with the MIME format, you cannot transmit a document to the receiver. Depending on the receiver's server, there may be some cases in which the error mail will not be sent back.

- If the size of a document's image data is too large, there is a possibility of unsuccessful transmission.

- You cannot change the font or character size of Internet mail that you receive.

How to Internet fax

Before using an Internet fax you must configure your Brother machine to communicate with your network and mail server. You must confirm the following items of your machine. You can configure these items from the control panel, Web Based Management, Remote Setup or BRAdmin Professional 3. If you are unsure of any of these items, please contact your systems administrator.

- IP address (If you are already using your machine on your network, the machine's IP address has been configured correctly.)
- E-mail address
- SMTP, POP3 server address/port/Authentication method
- Mailbox name and password

Sending an Internet fax

Before sending an Internet fax

To send the Internet fax, you can configure following items from the control panel, Web Based Management or Remote Setup.

1 **E-mail Subject** (if needed)

2 **Limit E-mail Size** (if needed)

3 **Request Delivery Notification (Send)** (if needed) (For more information, see *TX Verification Mail* on page 68.)
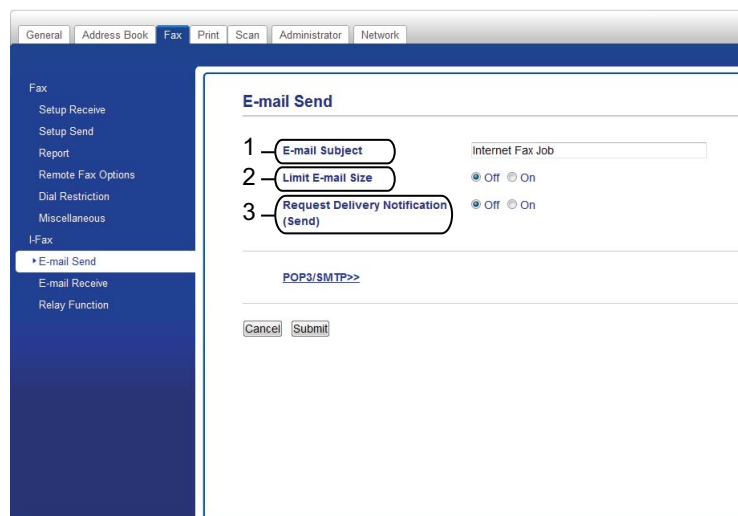
How to send an Internet fax

Sending an Internet fax is the same as sending a normal fax. (For more information, see the *Basic User's Guide*.) If you have already programmed the addresses of the destination Internet fax machines as Address Book or Speed Dial, you can send the Internet fax by loading the document into the machine.

NOTE

- If you wish to manually enter the Internet fax address, load the document into the machine and press ▨.
  Press `A 1 @` to choose numbers, characters or special characters. Enter the address and press `OK`, and then press `Fax Start`.
  For information on how to enter text, see the Quick Setup Guide.
- You can register the E-mail address information from Web Based Management or Remote Setup.

After the document is scanned, it is transmitted to the recipient Internet fax machine automatically via your SMTP server. You can cancel the send operation by pressing ✖ during scanning. After the transmission is finished, the machine will return to standby mode.

NOTE

Some E-mail servers do not allow you to send large E-mail documents (the System Administrator will often place a limit on the maximum E-mail size). With this function enabled, the machine will display `Out of Memory` when trying to send E-mail documents over 1 megabyte in size. The document will not be sent and an error report will be printed. The document you are sending should be separated into smaller documents that will be accepted by the mail server. (For your information, a 42 page document based on the ITU-T Test Chart #1 test chart is approximately 1 megabyte in size.)

Receiving E-mail or Internet fax

Before receiving an Internet fax

To receive the Internet fax, you can configure following items from the control panel, Web Based Management or Remote Setup:

1 **Auto Polling** (if needed)
2 **Polling Frequency** (if needed)
3 **Print Mail Header** (if needed)
4 **Delete POP Receive Error Mail** (if needed)
5 **Send Delivery Notification (Receive)** (if needed)
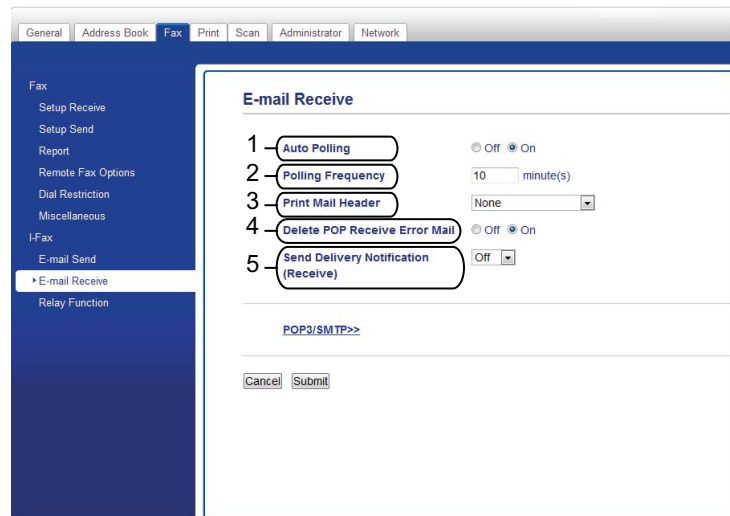
How to receive an Internet fax

There are 2 ways you can receive E-mail messages:

■ POP3 receiving at regular intervals

■ POP3 receiving (manually initiated)

When using POP3, the receiving machine must poll the E-mail server to receive the data. This polling can occur at set intervals (for example, you can configure the machine to poll the E-mail server at 10 minute intervals) or you can manually poll the server by pressing ▊, `All Settings`, `Network`, `E-mail/IFAX (Email/IFax)`, and then `Manual POP3 Receive`.

If your machine starts to receive E-mail data, the LCD panel will reflect this activity. For example, you will see `Receiving` on the LCD panel followed by `xx/xx E-mail(s)`. If you press ▊, `All Settings`, `Network`, `E-mail/IFAX (Email/IFax)`, and then `Manual POP3 Receive` to manually poll the E-mail server for E-mail data and there are no mail documents waiting to be printed, the machine will display `No Mail` on the LCD panel for two seconds.

NOTE

• If your machine is out of paper when receiving data, the received data will be held in the machine's memory. This data will be printed automatically after paper is re-inserted into the machine.

• When the Temporary Fax Backup Function on the control panel is turned on, received data will be stored for a certain period of time. For more details, see the *Advanced User's Guide*.

• If the received mail is not in a plain text format or an attached file is not in the TIFF-F format, the following error message will be printed: "**ATTACHED FILE FORMAT NOT SUPPORTED**". If the received mail is too large, the following error message will be printed: "**E-MAIL FILE TOO LARGE**". If **Delete POP Receive Error Mail** is ON (default) then the error mail is automatically deleted from the E-mail server.

Receiving an Internet fax to your computer

When a computer receives an Internet fax document, the document is attached to a mail message that informs the computer that it has received a document from an Internet fax. This is notified in the subject field of the received mail message.

NOTE

If the computer to which you wish to send a document is not running Windows® XP, Windows Server® 2003/2008, Windows Vista® or Windows® 7, please inform the computer's owner that they must install some software that can view TIFF-F files.

Additional Internet Fax options

Forwarding received E-mail and fax messages

You can forward received E-mail or standard fax messages to another E-mail address or fax machine. Received messages can be forwarded via E-mail to a computer or Internet fax. They can also be forwarded via standard phone lines to another machine.

The setting can be enabled using a web browser or through the control panel of the machine. The steps for configuring fax forward can be found in the *Advanced User's Guide*.

Please see the *Advanced User's Guide* to check that this feature is supported.

Relay broadcasting

This function allows the Brother machine to receive a document over the Internet, and then relay it to other fax machines through conventional telephone lines.

Before relaying broadcast

To relay broadcast, you must configure the following items from the control panel, Web Based Management or Remote Setup:

1 **Relay Broadcast Function**

   You must enable the relay broadcast.

2 **Relay Domain**

   You must configure your machine's domain name on the machine that will broadcast the document to the conventional fax machine. If you wish to use your machine as a relay broadcast device, you must specify the domain name that you trust at the machine, in other words, the portion of the name after the "@" sign. Use care in selecting a trusted domain since any user on a trusted domain will be able to send a relay broadcast.

   You can register up to 5 domain names.

3 **Relay Broadcast Report**

   A relay report will be printed out when the machine completes the relay broadcast.
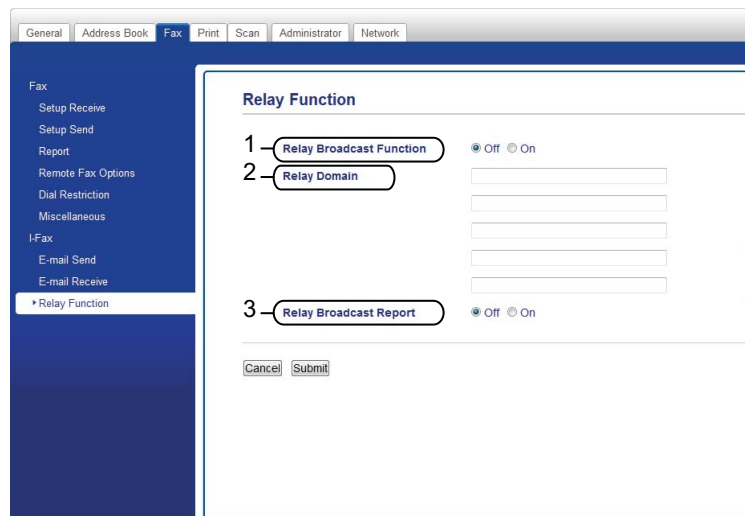
Relay broadcast from a machine
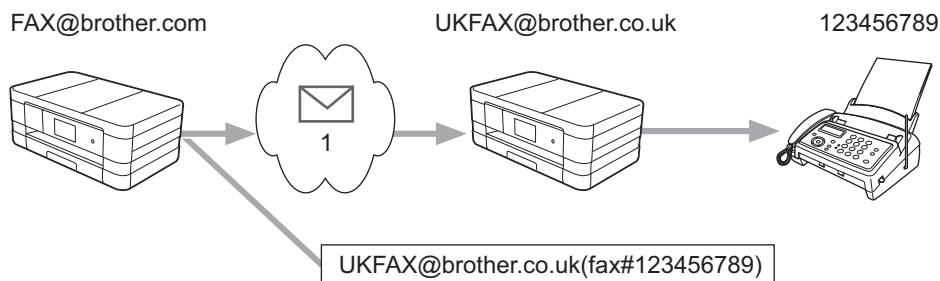
1 Internet

In this example, your machine has an E-mail address of FAX@brother.com, you wish to send a document from this machine to another machine in England with an E-mail address of UKFAX@brother.co.uk, this machine will then forward the document to a standard fax machine using a conventional telephone line. If your E-mail address is FAX@brother.com, you must configure a trusted domain name of brother.com on the machine in England that will broadcast the document to the conventional fax machine. If you do not enter the domain name information, then the machine in the middle (the machine that will broadcast the document) will not trust any Internet jobs that it receives from the machine in the @brother.com domain.

After the trusted domain is set you can send the document from your machine [e.g. FAX@brother.com] by entering the E-mail address of the machine [e.g. UKFAX@brother.co.uk] that will forward the document followed by the phone number of the fax that will receive the document. The following is an example of how to enter the E-mail address and phone number.

UKFAX@brother.co.uk(fax#123456789)

E-mail address

Fax Phone Number

The word "fax#" must be included with the phone number inside the parenthesis.
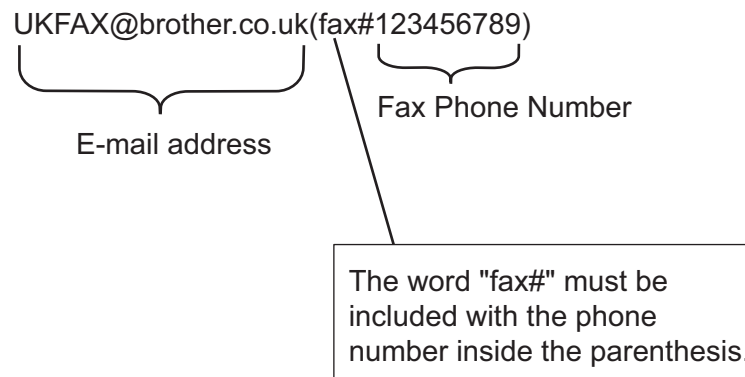
Sending to multiple E-mail addresses:

If you want to have the document relayed to more than one standard fax machine the destination can be entered using the following method:

(For MFC-J2510/J4510DW/J4710DW)

1. Press Fax.

2. Press Options.

3. Press Broadcasting.

4. Press Add Number.

5. You can add E-mail addresses to the broadcast in the following ways:

   ■ Press Add Number and press [icon], enter the E-mail address and press OK.

   ■ Press Add from Address book.
   Press the check boxes of the E-mail address you want to add to the broadcast.
   After you have checked all the E-mail address you want, press OK.

   ■ Press Search in Address book.
   Enter the name and press OK.
   The search results will be displayed. Press the name and then press the E-mail address you want to add to the broadcast.

6. After you have entered all the E-mail addresses by repeating steps 4 and 5, press OK.

7. Press Fax Start.

(For MFC-J2310/J4310DW/J4410DW/J4610DW)

1. Press Fax.

2. Press Options.

③ Press ∧ or ∨ to display `Broadcasting`.

④ Press `Broadcasting`.

⑤ Press `Add from Address Book`.
Press to search by Alphabetical Order or Numerical Order. Press the locations where you want to send a fax.
Press `OK`.

⑥ After you have entered all the E-mail addresses by repeating step ⑤, press `OK`.

⑦ Press `Fax Start`.

Relay broadcast from a computer
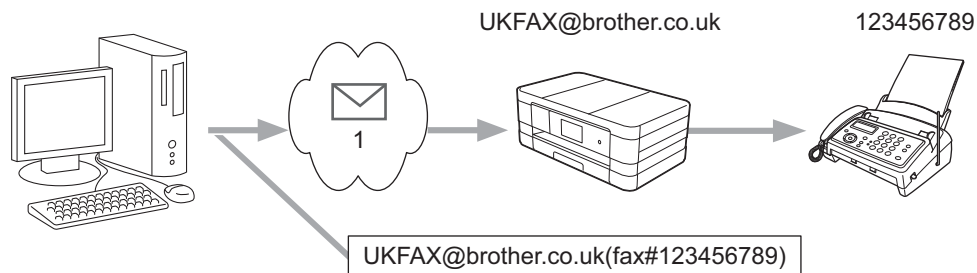
1 Internet

You can also send an E-mail from your computer and have it relayed to a conventional fax machine. The method of entering the phone number of the conventional fax machine that will receive the relayed E-mail will vary depending on the mail application you are using. The following are some examples of different mail applications:

Some E-mail applications do not support sending to multiple phone numbers. If your E-mail application cannot support multiple phone numbers you will only be able to relay to one fax machine at a time.

Enter the address of the relay machine and phone number of the fax in the "TO" box using the same method used when sending from a machine.

UKFAX@brother.co.uk(fax#123456789)

NOTE

For Microsoft® Outlook® 97 or greater, the address information must be entered into the address book as follows:

Name: fax#123456789

E-mail address: UKFAX@brother.co.uk

TX Verification Mail

Transmission Verification Mail supports two separate functions. Verification Mail for sending allows you to request notification from the receiving station that the Internet Fax or E-mail was received and processed.

Verification Mail for receiving allows you to transmit a default report back to the sending station after successfully receiving and processing an Internet Fax or E-mail.

To use this feature you must set the `Notification` option within the `Setup Mail RX` and `Setup Mail TX` options.

Setup Mail TX

You can set the `Notification` option in the `Setup Mail TX` option to either `On` or `Off`. When switched to `On` an additional field of information is sent with the image data. This field is named "MDN".

MDN (Message Disposition Notification):
This field requests the status of the Internet Fax/E-mail message after delivery through the SMTP (Simple Mail Transfer Protocol) transport system. Once the message has arrived at the receiver this data is used when the machine or user reads or prints the received Internet Fax or E-mail. For example, if the message is opened for reading or is printed the receiver sends back a notification to the original sending machine or user.

The receiver must support the MDN field in order to be able to send a notification report, otherwise the request will be ignored.

Setup Mail RX

There are three possible settings for this option `On`, `MDN` or `Off`.

Receive Notification "`On`"

When switched to "`On`" a fixed message is sent back to the sender to indicate successful reception and processing of the message. These fixed messages depend on the operation requested by the sender.

Report messages consist of:

`SUCCESS: Received From <Mail Address>`

Receive Notification "`MDN`"

When switched to "`MDN`" a report as described above is sent back to the sender if the originating station sent the "`MDN`" field to request confirmation.

Receive Notification "`Off`"

Off switches all forms of receive notification `Off`, no messages are sent back to the sender regardless of the request.

NOTE

To receive the TX verification mail properly, you must configure the following settings.

- Sender
  - Switch Notification in the Setup Mail TX to On.
  - Switch Header in the Setup Mail RX to All or Subject+From+To.
- Receiver
  - Switch Notification in the Setup Mail RX to On.

Error mail

If there is a mail delivery error while sending an Internet fax, the mail server will send an error message back to the machine and the error message will be printed. If there is an error while receiving mail, an error message will be printed (Example: "The message being sent to the machine was not in a TIFF-F format.").

To receive the error mail properly, you must switch Header in the Setup Mail RX to All or Subject+From+To.

8

Security features

Overview

In today's world there are many security threats to your network and the data that travels over it. Your Brother machine employs some of the latest network security and encryption protocols available today. These network features can be integrated into your overall network security plan to help protect your data and prevent unauthorized access to the machine. This chapter explains how to configure them.

You can configure the following security features:

■ Sending an E-mail securely (See *Sending an E-mail securely* on page 72.)

■ Secure Management using BRAdmin Professional 3 (Windows®) (See *Secure Management using BRAdmin Professional 3 (Windows®)* on page 74.)

NOTE

We recommend to disable the FTP and TFTP protocols. Accessing the machine using these protocols is not secure. (For how to configure the protocol settings, see *How to configure the machine settings using Web Based Management (web browser)* on page 47.) If you disable FTP, the Scan to FTP function will be disabled.

Sending an E-mail securely

Configuration using Web Based Management (web browser)

You can configure secured E-mail sending with user authentication on the Web Based Management screen.

1. Start your web browser.

2. Type "`http://printer's IP address/`" into your browser (where "`printer's IP address`" is the printer's IP address).

   - For example:

     `http://192.168.1.2/`

3. Enter a password in the **Login** box, and then click ➡.

4. Click the **Network** tab.

5. Click **Protocol**.

6. Click **Advanced Setting** of **POP3/SMTP** and make sure that the status of **POP3/SMTP** is **Enabled**.

7. You can configure the **POP3/SMTP** settings on this page.

NOTE

- For more information, see the Help text in Web Based Management.

- You can also confirm whether the E-mail settings are correct after configuration by sending a test E-mail.

8. After configuring, click **Submit**. The **Test E-mail Send/Receive Configuration** dialog appears.

9. Follow the on-screen instructions if you want to test with the current settings.

Sending an E-mail with user authentication

This machine supports POP before SMTP and SMTP-AUTH methods to send an E-mail via an E-mail server that requires a user authentication. You can use Web Based Management and BRAdmin Professional 3 to configure these settings. You can use POP before SMTP and SMTP-AUTH methods for E-mail Notification, E-mail reports and Internet fax sending.

E-mail server settings

You need to match the settings of SMTP authentication method with the method used by your E-mail server.

Set the machine's **SMTP Server Authentication Method** setting to **POP before SMTP** or **SMTP-AUTH** according to the authentication method used by your E-mail server.

Contact your network administrator or your ISP (Internet Service Provider) about the E-mail server configuration.

8

NOTE

- You can change the SMTP port number using Web Based Management. This is useful if your ISP (Internet Service Provider) implements the "Outbound Port 25 Blocking (OP25B)" service.

- If you can use both POP before SMTP and SMTP-AUTH, we recommend choosing SMTP-AUTH.

- If you choose POP before SMTP for the SMTP Server Authentication Method, you need to configure the POP3 settings. You can also use the APOP method if needed.

Secure Management using BRAdmin Professional 3 (Windows®)

To use the BRAdmin Professional 3 utility securely, you need to follow the points below

■ We strongly recommend to use the latest version of the BRAdmin Professional 3 utility that is available as a download from http://solutions.brother.com/. If you use an older version of BRAdmin [1] to manage your Brother machines the user authentication will not be secure.

■ If you are managing a mixed group of older print servers [2] and newer print servers with BRAdmin Professional 3, we recommend using a different password in each group. This will ensure security is maintained on the new print servers.

[1] BRAdmin Professional older than Ver. 2.80, BRAdmin Light for Macintosh older than Ver. 1.10

[2] NC-2000 series, NC-2100p, NC-3100h, NC-3100s, NC-4100h, NC-5100h, NC-5200h, NC-6100h, NC-6200h, NC-6300h, NC-6400h, NC-8000, NC-100h, NC-110h, NC-120w, NC-130h, NC-140w, NC-8100h, NC-9100h, NC-7100w, NC-7200w, NC-2200w

9 Troubleshooting

Overview

This chapter explains how to resolve typical network problems you may encounter when using your Brother machine. If, after reading this chapter, you are unable to resolve your problem, please visit the Brother Solutions Center at: http://solutions.brother.com/.

Identifying your problem

Make sure that the following items are configured before reading this chapter.

First check the following:
The power cord is connected properly and the Brother machine is turned on.
The access point (for wireless), router or hub is turned on and its link light is blinking.
All protective packaging has been removed from the machine.
The ink cartridges are installed properly.
The Scanner Cover and the Jam Clear Cover are fully closed.
Paper is inserted properly in the paper tray.
(For wired networks) A network cable is securely connected to the Brother machine and the router or hub.

Go to the page for your solution from the lists below:

- I cannot complete the wireless network setup configuration. (See page 75.)
- The Brother machine is not found on the network during the MFL-Pro Suite installation. (See page 76.)
- The Brother machine cannot print or scan over the network. (See page 77.)
- The Brother machine is not found on the network even after successful installation. (See page 77.)
- I'm using security software. (See page 79.)
- I want to check that my network devices are working properly. (See page 79.)

I cannot complete the wireless network setup configuration.

Question	Interface	Solution
Did your machine fail to connect to the network during wireless setup?	wireless	Turn your wireless router Off and back On. Then try and configure the wireless settings again.

I cannot complete the wireless network setup configuration. (continued)

Question	Interface	Solution
Are your security settings (SSID/Network Key) correct?	wireless	■ Confirm the security settings using the Wireless Setup Helper utility. For more information and to download the utility, see the Downloads page for your model at http://solutions.brother.com/.
		■ Reconfirm and choose the correct security settings.
		• The manufacturer's name or model no. of the WLAN access point/router may be used as the default security settings.
		• See the instructions supplied with your WLAN access point/router for information on how to find the security settings.
		• Ask the manufacturer of your WLAN access point/router or ask your Internet provider or network administrator.
		■ For information on what the SSID and Network Key are, see SSID, Network Key and channels in the *Network Glossary*.
Are you using MAC address filtering?	wireless	Confirm that the MAC address of the Brother machine is allowed in the filter. You can find the MAC address from Brother machine's control panel. (See *Function table and default factory settings* on page 41.)
Is your WLAN access point/router in stealth mode? (not broadcasting the SSID)	wireless	■ You should input the correct SSID name or Network Key by hand.
		■ Check the SSID name or the Network Key in the instructions supplied with your WLAN access point/router and reconfigure the wireless network setup. (For more information, see *Configuring your machine when the SSID is not broadcast* on page 23.)

The Brother machine is not found on the network during the MFL-Pro Suite installation.

Question	Interface	Solution
Is your computer connected to the network?	wired/wireless	Make sure that your computer is connected to a network e.g. a LAN environment or internet services. For further support on your network problems, please contact your network administrator.
Is your machine connected to the network and does it have a valid IP address?	wired/wireless	Print the Network Configuration Report and check that **Ethernet Link Status** or **Wireless Link Status** is **Link OK**. See *Printing the Network Configuration Report* on page 39.
		If the report shows **Link DOWN** (wired) or **Failed To Associate** (wireless), ask your network administrator whether your IP address is valid or not.
Are you using security software?	wired/wireless	■ Choose to search for the Brother machine again on the installer dialog.
		■ Allow access when the alert message of the security software appears during the MFL-Pro Suite installation.
		■ For more information about security software, see *I'm using security software.* on page 79.
Are you using a mobile Wi-Fi router?	wireless	The privacy separator on your mobile Wi-Fi router may be enabled. Confirm that the privacy separator is disabled.
Is your Brother machine placed too far from the WLAN access point/router?	wireless	Place your Brother machine within about 3.3 feet (1 meter) from the WLAN access point/router when you configure the wireless network settings.

9

The Brother machine is not found on the network during the MFL-Pro Suite installation. (continued)

Question	Interface	Solution
Are there any obstructions (walls or furniture, for example) between your machine and the WLAN access point/router?	wireless	Move your Brother machine to an obstruction-free area, or closer to the WLAN access point/router.
Is there a wireless computer, Bluetooth supported device, microwave oven or digital cordless phone near the Brother machine or the WLAN access point/router?	wireless	Move all devices away from the Brother machine or WLAN access point/router.

The Brother machine cannot print or scan over the network.
The Brother machine is not found on the network even after successful installation.

Question	Interface	Solution
Are you using security software?	wired/ wireless	See *I'm using security software.* on page 79.
Is your Brother machine assigned with an available IP address?	wired/ wireless	■ Confirming the IP address and the Subnet Mask. Verify that both the IP addresses and Subnet Masks of your computer and the Brother machine are correct and located on the same network. For more information on how to verify the IP address and the Subnet Mask, ask the network administrator or visit the Brother Solutions Center at http://solutions.brother.com/. ■ (Windows®) Confirming the IP address and the Subnet Mask using the Network Connection Repair Tool. Use the Network Connection Repair Tool to fix the Brother machine's network settings. It will assign the correct IP address and Subnet Mask. To use the Network Connection Repair Tool follow the steps below: **NOTE** • (Windows® XP/Windows Vista®/Windows® 7) Login to the network with Administrator privileges. • Make sure that the Brother machine is turned on and is network-connected to your computer.

The Brother machine cannot print or scan over the network.
The Brother machine is not found on the network even after successful installation. (continued)

Question	Interface	Solution
Is your Brother machine assigned with an available IP address? (Continued)	wired/ wireless	1 (Windows® XP, Windows Server® 2003/2008) Click the **Start** button, **All Programs**, **Accessories** and **Windows Explorer**, and then **My Computer**. (Windows Vista®/Windows® 7) Click the 🔵 button and **Computer**. 2 Double-click **Local Disk (C:)**, **Program Files** or **Program Files (x86)**, **Browny02**, **Brother**, **BrotherNetTool.exe** to run the program. **NOTE** If the **User Account Control** screen appears, (Windows Vista®) Click **Allow**. (Windows® 7) Click **Yes**. 3 Follow the on screen instructions. 4 Check the diagnosis by printing the Network Configuration Report. **NOTE** The Network Connection Repair Tool will start automatically if you check the **Enable Connection Repair Tool** box using the Status Monitor. Right-click on the Status Monitor screen, click **Options**, **Details** and then click the **Diagnostic** tab. This is not recommended when your network administrator has set the IP address to static, since it will automatically change the IP address. If the correct IP address and Subnet mask are still not assigned even after using the Network Connection Repair Tool, ask the network administrator for this information, or visit the Brother Solutions Center at http://solutions.brother.com/.
Did your previous print job fail?	wired/ wireless	■ If the failed print job is still in your computer's print queue, delete it. ■ Double-click the printer icon in the following folder and then choose **Cancel All Documents** in the **Printer** menu: (Windows® XP) **Start** and **Printers and Faxes**. (Windows Vista®) 🔵, **Control Panel**, **Hardware and Sound** and then **Printers**. (Windows® 7) 🔵, **Control Panel**, **Hardware and Sound**, **Devices and Printers** and then **Printers and Faxes**.

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The Brother machine cannot print or scan over the network.
The Brother machine is not found on the network even after successful installation. (continued)

Question	Interface	Solution
Are you connecting the Brother machine to the network using wireless capabilities?	wireless	■ Print the WLAN Report to confirm the state of a wireless connection. (For how to print, see *Printing the WLAN Report* on page 40.) If the printed WLAN report shows the connection failed, check the error code on the printed report. See Quick Setup Guide: *Troubleshooting* ■ See *The Brother machine is not found on the network during the MFL-Pro Suite installation.* on page 76.
I have checked and tried all of above, however the Brother machine does not print/scan. Is there anything else I can do?	wired/ wireless	Uninstall the MFL-Pro Suite and reinstall it.

I'm using security software.

Question	Interface	Solution
Did you choose to accept the security alert dialog during the MFL-Pro Suite or BRAdmin Light installation or when using the printing/scanning features?	wired/ wireless	If you did not choose to accept the security alert dialog, the firewall function of your security software may be rejecting access. Some security software might block access without showing a security alert dialog. To allow access, see the instructions of your security software or ask the manufacturer.
I want to know the necessary port number for the security software settings.	wired/ wireless	The following port numbers are used for Brother network features: ■ Network scanning [1] → Port number 54925 / Protocol UDP ■ PC-FAX RX [1] → Port number 54926 / Protocol UDP ■ Network scanning/printing [1], PC-FAX RX [1], Remote Setup [1] → Port number 137 and 161 / Protocol UDP ■ BRAdmin Light [1] → Port number 161 / Protocol UDP [1] Windows® only. For details on how to open the port, see the instructions of the security software or ask the manufacturer.

I want to check my network devices are working properly.

Question	Interface	Solution
Is your Brother machine, access point/router or network hub turned on?	wired/ wireless	Make sure you have confirmed all instructions in *Make sure that the following items are configured before reading this chapter.* on page 75.
Where can I find the Brother machine's network settings, such as IP address?	wired/ wireless	Printing the Network Configuration Report. See *Printing the Network Configuration Report* on page 39.

I want to check my network devices are working properly. (continued)

| Question	Interface	Solution
How can I check the link status of my Brother machine?	wired/ wireless	Print the Network Configuration Report and check that **Ethernet Link Status** or **Wireless Link Status** is showing **Link OK**. If the Link Status shows **Link DOWN** or **Failed To Associate**, start again from *Make sure that the following items are configured before reading this chapter.* on page 75.
Can you "ping" the Brother machine from your computer?	wired/ wireless	Ping the Brother machine from your computer by entering the IP address or the node name at the Windows® command prompt: `ping <ipaddress>` or `<nodename>`. ■ Successful → Your Brother machine is working correctly and connected to the same network as your computer. ■ Unsuccessful → Your Brother machine is not connected to the same network as your computer. (Windows®) Ask the network administrator and use the Network Connection Repair Tool to fix the IP address and the subnet mask automatically. For the detail of the Network Connection Repair Tool, see *(Windows®) Confirming the IP address and the Subnet Mask using the Network Connection Repair Tool.* on page 77. (Macintosh) Confirm the IP address and the Subnet Mask are set correctly. See *Confirming the IP address and the Subnet Mask.* on page 77.
Is the Brother machine connected to the wireless network?	wireless	Print the WLAN Report to confirm the state of a wireless connection. (For how to print, see *Printing the WLAN Report* on page 40.) If the printed WLAN report shows the connection failed, check the error code on the printed report. See Quick Setup Guide: *Troubleshooting*
I have checked and tried all of the above, however, I'm still having problems. Is there anything else I can do?	wireless	See the instructions supplied with your WLAN access point/router to find the SSID and the Network Key information and set them correctly. For details of the SSID and the Network Key, see *Are your security settings (SSID/Network Key) correct?* on page 76.

Section II

▶

Network Glossary

10 Types of network connections and protocols

Types of network connections

Wired network connection example

Peer-to-Peer printing using TCP/IP

In a Peer-to-Peer environment, each computer directly sends and receives data to each device. There is no central server controlling file access or machine sharing.

TCP/IP   TCP/IP
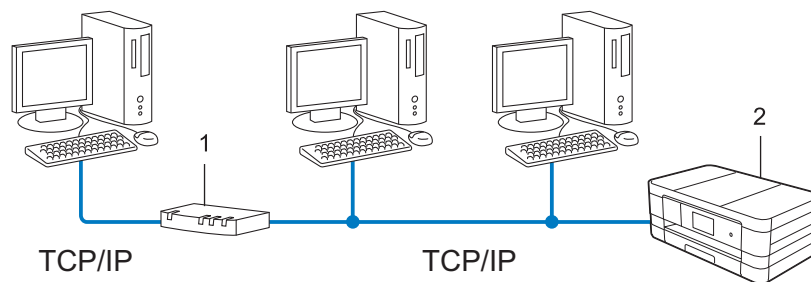
1 Router

2 Network machine (your machine)

- In a smaller network of 2 or 3 computers, we recommend the Peer-to-Peer printing method as it is easier to configure than the Network Shared printing method. See *Network Shared printing* on page 82.

- Each computer must use the TCP/IP Protocol.

- The Brother machine needs an appropriate IP address configuration.

- If you are using a router, the Gateway address must be configured on the computers and the Brother machine.

Network Shared printing

In a Network Shared environment, each computer sends data via a centrally controlled computer. This type of computer is often called a "Server" or a "Print Server". Its job is to control the printing of all print jobs.
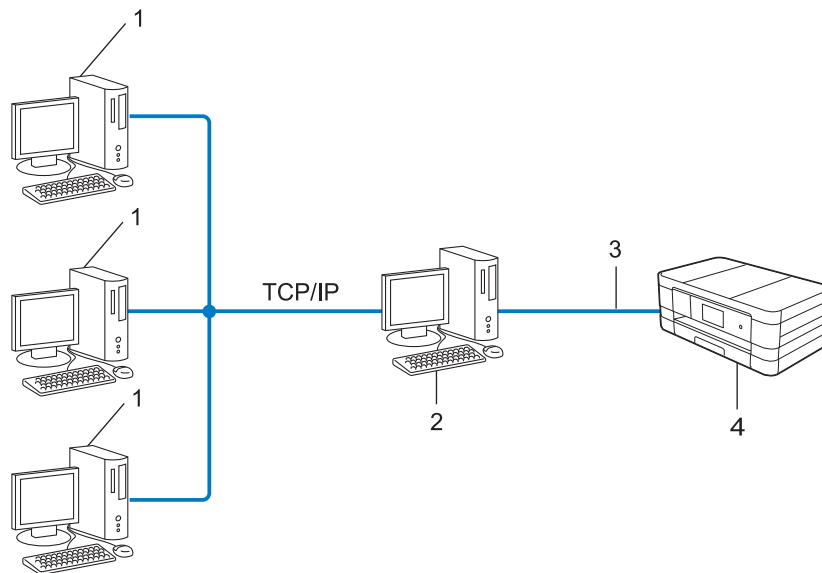
1 Client computer

2 Also known as "Server" or "Print server"

3 TCP/IP, USB or parallel (where available)

4 Network machine (your machine)

■ In a larger network, we recommend a Network Shared printing environment.

■ The "server" or the "print server" must use the TCP/IP print protocol.

■ The Brother machine needs to have an appropriate IP address configuration unless the machine is connected via the USB or the parallel interface at the server.

Protocols

TCP/IP protocols and functions

Protocols are the standardized sets of rules for transmitting data on a network. Protocols allow users to gain access to network connected resources.

The print server used on the Brother machine supports the TCP/IP (Transmission Control Protocol/Internet Protocol) protocol.

TCP/IP is the most popular set of protocols used for communication such as Internet and E-mail. This protocol can be used in almost all operating systems such as Windows®, Windows Server®, Mac OS X and Linux®. The following TCP/IP protocols are available on the Brother machine.

NOTE

You can configure the protocol settings by using the HTTP interface (web browser).

DHCP/BOOTP/RARP

By using the DHCP/BOOTP/RARP protocols, the IP address can be automatically configured.

NOTE

To use the DHCP/BOOTP/RARP protocols, please contact your network administrator.

APIPA

If you do not assign an IP address manually (using the control panel (for LCD models) of the machine or the BRAdmin software) or automatically (using a DHCP/BOOTP/RARP server), the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255.

ARP

Address Resolution Protocol performs mapping of an IP address to MAC address in a TCP/IP network.

DNS client

The Brother print server supports the Domain Name System (DNS) client function. This function allows the print server to communicate with other devices by using its DNS name.

NetBIOS name resolution

Network Basic Input/Output System name resolution enables you to obtain the IP address of the other device using its NetBIOS name during the network connection.

WINS

Windows® Internet Name Service is an information providing service for the NetBIOS name resolution by consolidating an IP address and a NetBIOS name that is in the local network.

LPR/LPD

Commonly used printing protocols on a TCP/IP network.

SMTP client

Simple Mail Transfer Protocol (SMTP) client is used to send E-mails via the Internet or Intranet.

Custom Raw Port (Default is Port 9100)

Another commonly used printing protocol on a TCP/IP network. It enables interactive data transmission.

IPP

The Internet Printing Protocol allows you to print documents directly to any accessible machine via the internet.

mDNS

mDNS allows the Brother print server to automatically configure itself to work in a Mac OS X Simple Network Configured system.

SNMP

The Simple Network Management Protocol (SNMP) is used to manage network devices including computers, routers and Brother network ready machines. The Brother print server supports SNMPv1 and SNMPv2.

LLMNR

The Link-Local Multicast Name Resolution protocol (LLMNR) resolves the names of neighboring computers, if the network does not have a Domain Name System (DNS) server. The LLMNR Responder function works in both the IPv4 or IPv6 environment when using a computer that has the LLMNR Sender function such as Windows Vista® and Windows® 7.

Web Services

The Web Services protocol enables Windows Vista® or Windows® 7 users to install the drivers used for printing and scanning by right-clicking the machine icon from the **Network** folder. (See *Installing drivers used for printing and scanning via Web Services (Windows Vista® and Windows® 7)* on page 93.) For details about scanning using Web Services, see the *Software User's Guide*. The Web Services also lets you check the current status of the machine from your computer.

HTTP

The HTTP protocol is used to transmit the data between a web server and a web browser.

FTP (For the Scan to FTP feature)

FTP (File Transfer Protocol) is a network protocol used to transfer files from one host to another. FTP allows the Brother machine to scan black and white or color documents directly to an FTP server located locally on your network or on the internet.

SNTP

The Simple Network Time Protocol is used to synchronize computer clocks on a TCP/IP network. You can configure the SNTP settings using Web Based Management (web browser). (For the details, see *Synchronize with SNTP server* on page 52.)

CIFS

The Common Internet File System is the standard way that computer users share files and printers in Windows®.

LDAP (For MFC-J2510/J4510DW/J4710DW)

The Lightweight Directory Access Protocol (LDAP) allows the Brother machine to search for information such as fax numbers and E-mail addresses from an LDAP server.

IPv6

For more information on the IPv6 protocol, visit the model page for the machine you are using at http://solutions.brother.com/.

10

11 Configuring your machine for a network

IP addresses, subnet masks and gateways

To use the machine in a networked TCP/IP environment, you need to configure its IP address and subnet mask. The IP address you assign to the print server must be on the same logical network as your host computers. If it is not, you must properly configure the subnet mask and the gateway address.

IP address

An IP address is a series of numbers that identifies each device connected to a network. An IP address consists of four numbers separated by dots. Each number is between 0 and 255.

■ Example: In a small network, you would normally change the final number.

- • 192.168.1.<u>1</u>
- • 192.168.1.<u>2</u>
- • 192.168.1.<u>3</u>

How the IP address is assigned to your print server:

If you have a DHCP/BOOTP/RARP server in your network the print server will automatically obtain its IP address from that server.

NOTE

On smaller networks, the DHCP server may also be the Router.

For more information on DHCP, BOOTP and RARP, see:
Using DHCP to configure the IP address on page 99.
Using BOOTP to configure the IP address on page 99.
Using RARP to configure the IP address on page 99.

If you do not have a DHCP/BOOTP/RARP server, the Automatic Private IP Addressing (APIPA) protocol will automatically assign an IP address from the range 169.254.1.0 to 169.254.254.255. For more information on APIPA, see *Using APIPA to configure the IP address* on page 100.

Subnet mask

Subnet masks restrict network communication.

■ Example: Computer 1 can talk to Computer 2

- • Computer 1

  IP Address: 192.168.1.2

  Subnet Mask: 255.255.255.000

- • Computer 2

  IP Address: 192.168.1.3

Subnet Mask: 255.255.255.000

Where the 0 is in the Subnet mask, there is no limit to communication at this part of the address. What this means in the above example is, we can communicate with any device that has an IP address that begins with 192.168.1.x. (where x. are numbers between 0 and 255).

Gateway (and router)

A gateway is a network point that acts as an entrance to another network and sends data transmitted via the network to an exact destination. The router knows where to direct data that arrives at the gateway. If a destination is located on an external network, the router transmits data to the external network. If your network communicates with other networks, you may need to configure the Gateway IP address. If you do not know the Gateway IP address then contact your Network Administrator.

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12 Wireless network terms and concepts

Specifying your network

SSID (Service Set Identifier) and channels

You need to configure the SSID and a channel to specify the wireless network you want to connect to.

■ SSID

Each wireless network has its own unique network name and it is technically referred to as an SSID or ESSID (Extended Service Set Identifier). The SSID is a 32-byte or less value and is assigned to the access point. The wireless network devices you want to associate to the wireless network should match the access point. The access point and wireless network devices regularly send wireless packets (referred to as a beacon) which has the SSID information. When your wireless network device receives a beacon, you can identify the wireless network that is close enough for the radio waves to reach your device.

■ Channels

Wireless networks use channels. Each wireless channel is on a different frequency. There are up to 14 different channels that can be used when using a wireless network. However, in many countries the number of channels available are restricted.

Security terms

Authentication and Encryption

Most wireless networks use some kind of security settings. These security settings define the authentication (how the device identifies itself to the network) and encryption (how the data is encrypted as it is sent on the network). **If you do not correctly specify these options when you are configuring your Brother wireless machine, it will not be able to connect to the wireless network.** Therefore care must be taken when configuring these options. To see which authentication and encryption methods your Brother wireless machine supports, see *Appendix A* on page 97.

Authentication and Encryption methods for a personal wireless network

A personal wireless network is a small network, for example using your machine in a wireless network at home, without IEEE 802.1x support.

Authentication methods

 Open system

Wireless devices are allowed to access the network without any authentication.

 Shared key

A secret pre-determined key is shared by all devices that will access the wireless network.

The Brother wireless machine uses the WEP key as the pre-determined key.

 WPA-PSK/WPA2-PSK

Enables a Wi-Fi Protected Access Pre-shared key (WPA-PSK/WPA2-PSK), which enables the Brother wireless machine to associate with access points using TKIP for WPA-PSK or AES for WPA-PSK and WPA2-PSK (WPA-Personal).

Encryption methods

 None

No encryption method is used.

 WEP

When using WEP (Wired Equivalent Privacy), the data is transmitted and received with a secure key.

 TKIP

TKIP (Temporal Key Integrity Protocol) provides per-packet key mixing, a message integrity check and rekeying mechanism.

 AES

AES (Advanced Encryption Standard) provides stronger data protection by using a symmetric-key encryption.

NOTE
• IEEE 802.11n does not support WEP and TKIP for the encryption method.

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• If you want to connect to your wireless network using IEEE 802.11n, we recommend to choose AES.

Network key

■ Open system/Shared key with WEP

This key is a 64-bit or 128-bit value that must be entered in an ASCII or hexadecimal format.

• 64 (40) bit ASCII:

Uses 5 text characters. e.g. "WSLAN" (this is case sensitive)

• 64 (40) bit hexadecimal:

Uses 10 digits of hexadecimal data. e.g. "71f2234aba"

• 128 (104) bit ASCII:

Uses 13 text characters. e.g. "Wirelesscomms" (this is case sensitive)

• 128 (104) bit hexadecimal:

Uses 26 digits of hexadecimal data. e.g. "71f2234ab56cd709e5412aa2ba"

■ WPA-PSK/WPA2-PSK and TKIP or AES

Uses a Pre-Shared Key (PSK) that is 8 or more characters in length, up to a maximum of 63 characters.

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Additional network settings from Windows®

Types of additional network settings

The following features are available to use if you want to configure additional network settings.

■ Web Services for printing and scanning (Windows Vista® and Windows® 7)

■ Vertical Pairing (Windows® 7)

NOTE
Verify the host computer and the machine are either on the same subnet, or that the router is properly configured to pass data between the two devices.

Installing drivers used for printing and scanning via Web Services (Windows Vista® and Windows® 7)

The Web Services feature allows you to monitor machines on the network. This also simplifies the driver installation process. Drivers used for printing and scanning via Web Services can be installed by right-clicking the printer icon on the computer, and the computer's Web Services port (WSD port) will be created automatically. (For details about scanning using Web Services, see the *Software User's Guide*.)

NOTE

• You must configure the IP address on your machine before you configure this setting.

• For Windows Server® 2008, you must install Print Services.

1 Insert the installation CD-ROM.

2 Choose your CD-ROM drive/**install**/**driver**/**gdi**/**32_64**.

3 Double-click **dpinstx64.exe** or **dpinstx86.exe**.

NOTE

If the **User Account Control** screen appears,

(Windows Vista®) Click **Allow**.

(Windows® 7) Click **Yes**.

4 (Windows Vista®)

Click ![Windows logo] , then choose **Network**.

(Windows® 7)

Click ![Windows logo] , **Control Panel**, **Network and Internet**, and then **View network computers and devices**.

5 The machine's Web Services Name will be shown with the printer icon. Right-click the machine you want to install.

NOTE

The Web Services Name for the Brother machine is your model name and the MAC Address (Ethernet Address) of your machine (e.g. Brother MFC-XXXX (model name) [XXXXXXXXXXXX] (MAC Address / Ethernet Address)).

6 From the pull down list, click **Install**.

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Uninstalling drivers used for printing and scanning via Web Services (Windows Vista® and Windows® 7)

To uninstall Web Services from a computer, follow the instructions below.

1. (Windows Vista®)

   Click , then choose **Network**.

   (Windows® 7)

   Click , **Control Panel**, **Network and Internet** and then **View network computers and devices**.

2. The machine's Web Services Name will be shown with the printer icon. Right-click on the machine you want to uninstall.

3. From the pull down list, click **Uninstall**.

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Network printing and scanning installation for Infrastructure mode when using Vertical Pairing (Windows® 7)

Windows® Vertical Pairing is a technology to allow your Vertical Pairing supported wireless machine to connect to your Infrastructure network using the PIN Method of Wi-Fi Protected Setup and the Web Services feature. This also enables the printer and scanner driver installation from the multi-function printer icon in the **Add a device** screen.

If you are in Infrastructure mode, you can connect your machine to the wireless network and then install the printer and scanner driver using this feature. Follow the steps below:

NOTE

• If you have set your machine's Web Services feature to Off, you must set it back to On. The default setting of the Web Services for the Brother machine is On. You can change the Web Services setting by using Web Based Management (web browser) or BRAdmin Professional 3.

• Make sure your WLAN access point/router includes the Windows® 7 compatibility logo. If you are not sure about the compatibility logo, contact your access point/router manufacturer.

• Make sure your computer includes the Windows® 7 compatibility logo. If you are not sure about the compatibility logo, contact your computer manufacturer.

• If you are configuring your wireless network using an external wireless NIC (Network Interface Card), make sure the wireless NIC includes the Windows® 7 compatibility logo. For more information, contact your wireless NIC manufacturer.

• To use a Windows® 7 computer as a Registrar, you need to register it to your network in advance. See the instruction supplied with your WLAN access point/router.

1 Turn on your machine.

2 Set your machine in Wi-Fi Protected Setup (PIN Method).
For how to configure your machine to use the PIN Method, see *Configuration using the PIN Method of WPS (Wi-Fi Protected Setup)* on page 16.

3 Click the 🗔 button and then **Devices and Printers**.

4 Choose **Add a device** on the **Devices and Printers** dialog.

5 Choose your machine and input the PIN which your machine has indicated.

6 Choose the Infrastructure network that you want to connect to, and then click **Next**.

7 When your machine appears in the **Devices and Printers** dialog, the wireless configuration and the printer driver installation are successfully completed.

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Section III

▶

Appendixes

A Appendix A

Supported protocols and security features

Interface	Ethernet	Ethernet 10/100BASE-TX Auto Negotiation
	Wireless	IEEE 802.11b/g/n (Infrastructure Mode/Ad-hoc Mode)
		IEEE 802.11g/n (Wi-Fi Direct)
Network (common)	Protocols (IPv4)	ARP, RARP, BOOTP, DHCP, APIPA (Auto IP), WINS/NetBIOS name resolution, DNS Resolver, mDNS, LLMNR responder, LPR/LPD, Custom Raw Port/Port9100, IPP, FTP Client and Server, SNMPv1/v2c, TFTP server, SMTP Client, APOP, POP before SMTP, SMTP-AUTH, ICMP, Web Services (Print/Scan), CIFS Client, SNTP Client
	Protocols (IPv6)	(Turned off as default) NDP, RA, LPR/LPD, Custom Raw Port/Port9100, IPP, mDNS, FTP Server, SNMPv1, TFTP, Scanner Port, Web Services (Print/Scan), SMTP Client, POP before SMTP, SMTP-AUTH, POP3, APOP, FTP Client, SNTP Client, CIFS Client
Network (Security)	Wireless	SSID (32 chr), WEP 64/128 bit, WPA-PSK (TKIP/AES), WPA2-PSK (AES)

B Appendix B

Using services

A service is a resource that can be accessed by computers that wish to print to the Brother print server. The Brother print server provides the following predefined services (do a SHOW SERVICE command in the Brother print server remote console to see a list of available services): Enter HELP at the command prompt for a list of supported commands.

Service (Example)	Definition
BINARY_P1	TCP/IP binary
TEXT_P1	TCP/IP text service (adds carriage return after each line feed)
BRNxxxxxxxxxxxx	TCP/IP binary

Where "xxxxxxxxxxxx" is your machine's MAC Address (Ethernet Address).

B

Other ways to set the IP address (for advanced users and administrators)

Using DHCP to configure the IP address

The Dynamic Host Configuration Protocol (DHCP) is one of several automated mechanisms for IP address allocation. If you have a DHCP server on your network, the print server will automatically obtain its IP address from the DHCP server and register its name with any RFC 1001 and 1002-compliant dynamic name services.

NOTE

If you do not want your print server configured via DHCP, BOOTP or RARP, you must set the Boot Method to static so that the print server has a static IP address. This will prevent the print server from trying to obtain an IP address from any of these systems. To change the Boot Method, use the machine's control panel Network setting (for LCD models), BRAdmin applications, Remote Setup or Web Based Management (web browser).

Using RARP to configure the IP address

Before you configure the IP address using RARP, you must set the machine's Boot Method to RARP. To change the Boot Method, use the machine's control panel Network setting, BRAdmin applications, Remote Setup (For MFC models) or Web Based Management (web browser).

The Brother print server's IP address can be configured using the Reverse ARP (RARP) facility on your host computer. This is done by editing the `/etc/ethers` file (if this file does not exist, you can create it) with an entry similar to the following:

`00:80:77:31:01:07    BRN008077310107` (or `BRW008077310107` for a wireless network)

Where the first entry is the MAC Address (Ethernet Address) of the print server and the second entry is the name of the print server (the name must be the same as the one you put in the `/etc/hosts` file).

If the RARP daemon is not already running, start it (depending on the system the command can be `rarpd`, `rarpd -a`, `in.rarpd -a` or something else; type `man rarpd` or refer to your system documentation for additional information). To verify that the RARP daemon is running on a Berkeley UNIX based system, type the following command:

`ps -ax | grep -v grep | grep rarpd`

For AT&T UNIX-based systems, type:

`ps -ef | grep -v grep | grep rarpd`

The Brother print server will get the IP address from the RARP daemon when the machine is powered on.

Using BOOTP to configure the IP address

Before you configure the IP address using BOOTP, you must set the machine's Boot Method to BOOTP. To change the Boot Method, use the machine's control panel Network setting, BRAdmin applications, Remote Setup (For MFC models) or Web Based Management (web browser).

B

BOOTP is an alternative to RARP that has the advantage of allowing configuration of the subnet mask and gateway. In order to use BOOTP to configure the IP address make sure that BOOTP is installed and running on your host computer (it should appear in the `/etc/services` file on your host as a real service; type `man bootpd` or refer to your system documentation for information). BOOTP is usually started up via the `/etc/inetd.conf` file, so you may need to enable it by removing the "#" in front of the bootp entry in that file. For example, a typical bootp entry in the /etc/inetd.conf file would be:

```
#bootp dgram udp wait /usr/etc/bootpd bootpd -i
```

Depending on the system, this entry might be called "bootps" instead of "bootp".

NOTE

In order to enable BOOTP, simply use an editor to delete the "#" (if there is no "#", then BOOTP is already enabled). Then edit the BOOTP configuration file (usually `/etc/bootptab`) and enter the name, network type (1 for Ethernet), MAC Address (Ethernet Address) and the IP address, subnet mask and gateway of the print server. Unfortunately, the exact format for doing this is not standardized, so you will need to refer to your system documentation to determine how to enter this information (many UNIX systems also have template examples in the bootptab file that you can use for reference). Some examples of typical `/etc/bootptab` entries include: ("BRN" below is "BRW" for a wireless network.)

```
BRN310107 1  00:80:77:31:01:07 192.168.1.2
```

and:

```
BRN310107:ht=ethernet:ha=008077310107:\ip=192.168.1.2:
```

Certain BOOTP host software implementations will not respond to BOOTP requests if you have not included a download filename in the configuration file. If this is the case, simply create a null file on the host and specify the name of this file and its path in the configuration file.

As with RARP, the print server will load its IP address from the BOOTP server when the machine is powered on.

Using APIPA to configure the IP address

The Brother print server supports the Automatic Private IP Addressing (APIPA) protocol. With APIPA, DHCP clients automatically configure an IP address and subnet mask when a DHCP server is not available. The device chooses its own IP address in the range 169.254.1.0 through to 169.254.254.255. The subnet mask is automatically set to 255.255.0.0 and the gateway address is set to 0.0.0.0.

By default, the APIPA protocol is enabled. If you want to disable the APIPA protocol, you can disable it using control panel of the machine (for LCD models), BRAdmin Light or Web Based Management (web browser).

Using ARP to configure the IP address

If you are unable to use the BRAdmin application and your network does not use a DHCP server, you can also use the ARP command. The ARP command is available on Windows® systems that have TCP/IP installed as well as UNIX systems. To use ARP enter the following command at the command prompt:

```
arp -s ipaddress ethernetaddress
ping ipaddress
```

Where `ethernetaddress` is the MAC Address (Ethernet Address) of the print server and `ipaddress` is the IP address of the print server. For example:

■ **Windows® systems**

Windows® systems require the dash "-" character between each digit of the MAC Address (Ethernet Address).

```
arp -s 192.168.1.2 00-80-77-31-01-07
ping 192.168.1.2
```

■ **UNIX®/Linux systems**

Typically, UNIX and Linux systems require the colon ":" character between each digit of the MAC Address (Ethernet Address).

```
arp -s 192.168.1.2 00:80:77:31:01:07
ping 192.168.1.2
```

NOTE

You must be on the same Ethernet segment (that is, there cannot be a router between the print server and operating system) to use the arp -s command.

If there is a router, you may use BOOTP or other methods described in this chapter to enter the IP address. If your administrator has configured the system to deliver IP addresses using BOOTP, DHCP or RARP your Brother print server can receive an IP address from any one of these IP address allocation systems. In which case, you will not need to use the ARP command. The ARP command only works once. For security reasons, once you have successfully configured the IP address of a Brother print server using the ARP command, you cannot use the ARP command again to change the address. The print server will ignore any attempts to do this. If you wish to change the IP address again, use a Web Based Management (web browser) or factory reset the print server (which will then allow you to use the ARP command again).

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